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MEASUREMENT AND ADJUSTMENT SERIES
EDITED BY LEWIS M. TERMAN

EDUCATION OF GIFTED CHILDREN

BY LULU M. STEDMAN
Organizer of and Training Teacher in charge of the Opportunity Room
University of California
Southern Branch

Yonkers-on-Hudson, New York
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THE HOUSE OF APPLIED KNOWLEDGE

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Scientific method in education involves the careful measurement of each child's ability to learn and of the amount that he has learned. It also involves adjustment of organization, subject matter, and methods of instruction to the varying needs and abilities of pupils. This book is the third of a series that will set forth the value, technique, and applications of educational measurement and adjustment. It deals with the subject as it is related to that group of school children who are highly endowed mentally

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PREFACE

THE opportunity room in the training school of the University of California, Southern Branch, owes its beginning to the vision of Dr. William T. Root, Jr., of the University of Pittsburgh. It was at his suggestion that the class was organized by the writer in 1918, and to him she is greatly indebted for assistance and encouragement in the initiation of the project.

The writer wishes also to express her indebtedness to Dr. Lewis M. Terman, Professor of Psychology, Leland Stanford Jr. University, under whose editorial direction this book was written; to Dr. E. C. Moore, Professor of Education and Director of the University of California, Southern Branch, for granting concessions which made it possible for her to undertake the experiment; to Miss Ethel I. Salisbury, Associate Professor of Elementary Education, University of California, Southern Branch, and many others of the supervisory force whose coöperation facilitated the progress of the experiment; and to Dr. Charles W. Waddle, Professor of Education and Supervisor in charge of training in the University of California, Southern Branch, for criticism of the manuscript and for constant coöperation in the conduct of the experiment.

LULU M. STEDMAN

LOS ANGELES, CALIFORNIA

1634

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EDITOR'S INTRODUCTION

During the last few years the results of tests and measurement in the public schools have brought into relief a great variety of educational problems which had previously been overlooked or the importance of which had been insufficiently appreciated. Among these is the problem of the gifted child. Although experimental studies in the education of defectives have been made from time to time for almost a century, it was not until the results of intelligence tests began to come in, a decade ago, that the need of special educational provision for children of exceptional ability began to be recognized.

One reason for the general neglect of this field of pedagogy has been the widespread belief that the apparently gifted child is merely precocious, and usually pathologically so. However, recent experimental studies have shown conclusively that this belief has little or no foundation in fact. All the scientific evidence at hand points to the conclusion that gifted children are superior to unselected children in physical and non-intellectual mental traits as well as in intelligence, and that they carry this advantage into adult life. We are coming to recognize that from their ranks, and from nowhere else, our geniuses in every line are recruited.

Instead of working upon the "wonder child" as an individual to be pitied because of his supposed abnormality, and to be shielded from intellectual stimulation for fear of injury to his delicate nervous structure, we are beginning to see the problem in an entirely different light. The education of the gifted child has adopted a positive rather than a negative aim. We wish to know what educational methods will enable us to make the most of the superior raw material afforded by our gifted group; it is no longer a question of

how best to defend a special type of pathologically tainted individuals from an imminent and unhappy fate.

At the present time there are in progress scores if not hundreds of experiments in the training of gifted children. Unfortunately, few of these have been under way any considerable length of time and fewer still have been adequately reported. We are learning a great deal about the mental and physical traits of such children, but we still know very little as to the most effective methods of training them. The editor believes that Miss Stedman's rather detailed account of the methods she has found most useful in her five years of experience with such children is an important educational contribution. It should be of interest not only to teachers of similar classes, but to educators generally and to parents; for it is by no means improbable that the educational methods best adapted to gifted children will be found to have wide applicability in the training of all children. Normal pedagogy has certainly benefited from the pedagogy of defectives; it has far more to learn from the pedagogy of the gifted.

LEWIS M. TERMAN

EDUCATION OF GIFTED CHILDREN

CHAPTER ONE

The Case of N. W.

In 1915, at the age of seven, a boy entered a private school in Berkeley, California, remaining five months. The family then moved to Los Angeles, where the boy enrolled in the A third grade of the University Training School in September, 1915. A serious illness compelled him to leave after two months, but he reëntered the same grade in September, 1916. In January, 1917, he was promoted to the B fifth grade. Shortly afterward, because of the superior quality of his work, he was advanced to the A fifth grade. His continued success in the classroom, together with a supercilious attitude toward student teachers and toward his classmates, whom he regarded as inferiors, made it apparent that unless he was to become an intellectual vagabond or grow dissatisfied with and uninterested in school, some way must be found to engage his powers more fully. In referring to student teachers, he said that he was not especially interested in talking with many of them, as he felt they seldom knew what they were talking about. After visiting a school in a poor quarter of the city, he remarked that evidently the children did not come from the best families, since their English was so poor.

He was extremely non-social, lacking both inclination and ability to play. Soon a mutual antagonism developed between the other boys of the class and himself. So great was the animosity aroused that it was a common occurrence for the boys to waylay him after school, chase him home, and administer, when possible, vigorous physical discipline.

Obviously something had to be done. As a basis for judgment, a battery of intelligence and educational tests was

administered. In the Stanford Revision of the Binet-Simon Tests his score was as follows: mental age, 14–11; chronological age, 9–2; IQ, 163. He reached the superior adult level in the vocabulary test, defining correctly seventy-five words. The results of the educational tests disclosed ability to think logically and deliberately; unusual power of concentration; and a knowledge of geography, history, and literature surpassing that of most ninth-grade pupils. On the other hand, he was abnormally slow in certain other activities. From childhood his education had been directed by his parents, the father being a university graduate and the mother a college woman. Although he was read to almost constantly, no serious effort had been made to teach him until he began to read for himself. His education was then based almost wholly on his spontaneous interest in reading and in objective things. All questions he asked were answered to the best of his parents' ability. When they were unable to satisfy him, the three went to the library to study together. Education was a part of life rather than a thing apart from it. It permeated all the child's activities and interests. However, almost no attention was given to arithmetic. Furthermore, he was never hurried; and as he was deliberate by nature and had never worked under pressure of time, he failed completely in all speed tests in the fundamentals of arithmetic and was rarely able to finish written work in the time allotted the class.

Inasmuch as the school at that time made no provision for special teaching of children of his type, he was given private instruction daily. This period was devoted wholly to developing the skills in which he was lacking; namely, power to handle the fundamentals of arithmetic quickly and accurately, and ability to write with a reasonable degree of speed. The purpose was to prepare him to enter the seventh grade without the gaps which sometimes result from extra promo-

tions. During six weeks of private tutoring he completed the work outlined for the sixth grade in arithmetic and language, attaining the median speed for the sixth grade in ability to handle the mechanics of arithmetic as measured by the Courtis tests, and the median rate of writing for the same grade as measured by the Ayres scale.

In the fall of 1917, at the age of ten, he entered the seventh grade, where his progress was most satisfactory. Perhaps more significant than his success as a student was the change in his social life and play interests. Where formerly he had been ostracized by his fellows, in the new environment with children nearer his mental level, he won the friendship of the other members of the class and even became popular. So great was his interest in baseball and soccer that he always arrived at school at least an hour early in the morning, remained until the warning bell at night, and seemed to begrudge the time spent in eating his luncheon.

His record in the junior high school was consistently good. At his parents' request, he was not permitted at this period to skip additional grades. In 1920, at the age of thirteen, he entered the sophomore class of high school. At the end of half a year he was advanced to the Junior B class. Following is a brief statement of his high school career submitted in reply to a questionnaire:

1. N. W. has received 1's and 2's so far in high school subjects.[1] He skipped the Sophomore A grade and was on the Junior A honor roll.

2. In the Terman Group Test given to approximately 250 students, he was one of ten who scored above 190 out of a possible 220 points — his score being 196. At the time the test was given, N. W. was thirteen years and six months of age.

3. He was treasurer and is now president of the French Club.

[1] A later report shows that N. W. received 3 in French and 3 in Physics the last term in school, due, a teacher reported, to spending a large part of his time in preparing his graduating essay.

4. He has not been especially active in athletics but plays a very good game of tennis; in fact, gives a good account of himself with boys several years his senior.
5. He is interested in dramatics and was chosen to take part in the Senior B class play.
6. He is the youngest member of the senior class; will be fifteen in November and will graduate the following February.
7. He has tentatively chosen his life vocation, law.
8. N. W. is 5 feet 9 inches tall, and is strong and well physically.

N. W. was graduated from the Los Angeles High School in February, 1923, and was one of three of a class of 187 members to deliver an essay at the Commencement exercises. He entered the Freshman class of the University of California in September, 1923, just seven years from the time when he entered the A third grade in the training school of the same institution.

The chapters which follow set forth the results of a five-year experiment with a class composed exclusively of children resembling N. W. in superiority of intelligence.

CHAPTER TWO

The Opportunity Room for Gifted Children: Problems and Principles

With civilization rapidly growing more complex, a greater need exists than ever before for original thinkers and wise leaders. The leaders of the next generation will be recruited from the ranks of the children of the present; consequently a grave responsibility rests with the school. Thoughtful educators, appreciating this responsibility, are sponsoring a rapidly growing movement for the better training of gifted children. A significant example of the value of exceptional opportunities for such children was demonstrated in the case of N. W., described in Chapter I. It was due primarily to this particular case that the experiment of organizing a special class was undertaken. The experiment was begun in January, 1918, in the Training Department of the Los Angeles State Normal School, now the Southern Branch of the University of California. In starting this "opportunity class" it was the aim of the school to establish for gifted children an environment where their abilities might develop in accordance with the psychological principles underlying individuality.

Many of the faculty and some of the school patrons argued against the segregation of gifted children. They contended that it was undemocratic to provide so small a group with such exceptional advantages. Were their arguments valid? Does educational democracy necessarily mean the same education for all? Does it not mean rather equal opportunity for every individual to develop to the maximum of his capacity? And is such an achievement possible when children are taught *en masse?* The special classes for subnormal children, now a recognized part of every progressive school system, attempt to furnish this opportunity for children of

inferior intelligence. In such classes the enrollment per teacher is usually limited to about fifteen, less than half the number assigned to teachers of regular classes. In developmental schools of this kind classes of six or eight pupils are by no means uncommon. The wisdom, or rather necessity, of such provision is no longer questioned, nor is it considered undemocratic. Yet from a practical standpoint it may be far more profitable for the State to provide special educational advantages for children who are gifted with superior endowment. The high potentiality of this group for social service should make their education in its entirety a social concern of paramount importance. It was largely this belief that gave rise to the opportunity room herein described.

In the beginning a selected group was given a battery of educational and mental tests. After a sifting process, ten children formed the charter members of the class. In chronological age they ranged from seven to eleven years; in mental age, measured by the Stanford-Binet scale, from eleven and a half to fourteen and a half years; in intelligence, from IQ 125 to IQ 167. This method of selection has been continued, except that the original 125 IQ standard for eligibility was raised in September, 1922, to the present standard of 140 IQ. In a few cases, for unusual reasons, exceptions have been made to this rule. In conducting the tests care is taken to avoid giving any information or leaving any impressions which would cause the successful candidates to become conceited. The results are not known to any but the examiner and the teachers concerned.

In the beginning this class met the needs of gifted children in the middle grades only; namely, from the A fourth to the A sixth inclusive, although the A fourth group included one child from the A third. However, a child was not bound by grade limits, but worked either with one group or with several groups according to his abilities and interests. Until

recently the personnel of our opportunity class was recruited mainly from the fifth grade. Upon completing the course outlined for the seventh grade, children were transferred to the eighth grade of the junior high schoool. In September, 1921, it was deemed wise to extend the project to include the eighth grade, grouping the children into two main divisions, juniors and seniors. The junior division followed the curriculum of the average fifth and sixth grades, adapted and augmented to its needs; the senior division that of the ordinary seventh and eighth grades, greatly enriched.

In September, 1922, the experiment was extended by the organization of a second opportunity room, making it possible to separate juniors and seniors and to extend the privileges of the special room to a larger number of children. An ideal plan would be the establishment of three rooms of this type: primary, intermediate, and junior high. With these opportunity rooms incorporated as a part of the school, yet existing as separate units, to permit gifted children to move through the school independent of the regular grades and traditional curricula, definite provision would be made for the needs of this class of children throughout their elementary school career.

In some cases economic conditions and administrative factors may be such that it would not be desirable to establish three rooms of this kind in all schools. It is possible, however, to organize centers for gifted children in widely separated districts of a city. These centers could then serve the needs of all the schools in the vicinity.

One of the most interesting experiments we have yet undertaken is now in the process of trial. Two boys, one eleven years of age, the other twelve, have completed the eighth grade. The one is rather delicate and high strung; the other, until recently, was non-social and unable to compete with other children in physical activities. In both

cases the parents were unwilling to send the children to high school for fear they would be dubbed "high school babies" and socially ostracized. The problem, therefore, was to provide for these boys a post-eighth-grade course which would make suitable demands upon them intellectually without introducing them to high school subjects. As was expected, some children of the regular eighth-grade group asked to be permitted to take some of the post-eighth-grade courses. The experiment may eventuate in a special course for gifted children in the eighth grade.[1]

To take their own pace instead of lockstepping, children must study independently, choose their own goals, and work to the maximum of their capacity. To develop fully, they must encounter situations which will try their powers to the utmost. Without choice and conflict there can be no real growth. To this end, the first problems undertaken in the opportunity room were teaching how to study, how to use the library, and how, in a simple way, to do research work. The child who possesses these abilities has gained more real education than can be derived from any amount of mere knowledge. These children not only demonstrated ability to work alone but manifested a decided preference for independent study. Very soon they became surprisingly adept at investigating a subject from many angles. The librarian who presented the first course reported that they made more and better use of the library than any other group in the normal school. She stated also that ordinary junior high school groups who had received the same instruction apparently forgot their training as soon as the lessons were ended. Normal school students, she declared, would resort to any means to avoid consulting the card catalogue. In direct contrast, the children of the opportunity

[1] A course in history was worked out in which the children made extensive use of Wells's *Outline of History* and Van Loon's *History of Mankind.*

room, at that time including children who were of chronological age corresponding to the fourth, fifth, and sixth grades, seldom asked for the librarian's assistance in finding a book. A few of the older children made good use of the *Reader's Guide.* Continuance in this library training with successive groups has brought results just as satisfying. The present program makes provision for a lesson once a week in a near-by branch of the public library. This period is spent in various ways. Sometimes the librarian lectures to the children. Sometimes they solve problems assigned by her. Usually they work on problems related to their various activities. They use the dictionary, encyclopedias, books of synonyms and antonyms, the *World Almanac,* and *Who's Who.*

From the beginning the most difficult problem was how to teach these children. Expressed in the usual terms of school classification, the group represented four grades. Measured in terms of mental endowment, it included many degrees of ability. It was evident that to meet the needs of these varying capacities the method of instruction must be essentially individual. Because of the possible non-social effect of over-emphasis upon individual instruction, a plan was devised which provided for approximately equal amounts of individual instruction and group discussion.

Individualized instruction demands a technique of teaching quite different from that employed in the average classroom. Instead of assignments prescribed for all, regardless of interest or ability, each individual, whether working alone or in a group, must have his own assignment. In order to combat the tendency to lockstep, these assignments must be very flexible in nature. Moreover, each child upon completing an assignment dealing with a given unit of work must be permitted to proceed to the next without regard to what other members of the class may be doing. This is the plan

in actual operation. By this method no time is squandered through children waiting for slower members of the class. The assignments consist of questions to be answered, problems to be solved, or both. Some are in the form of syllabi, others are mere topical suggestions, depending entirely upon the nature of the subject. Since the aim of the course is to lead children to study independently and to develop the power to think, an effort is made to work out lesson assignments of the kind that provoke thought, rather than assignments that lead to memorization. In fact, the children have been encouraged to make their own outlines of study. In preparing study-plans of this kind, each pupil lists the points which he wishes to study. Through a discussion between group and teacher these separate contributions are welded into a whole, amplified and enriched. Non-essentials are cast out, and the finished product serves as a basis of class study.

In social subjects it has been the policy to keep the children grouped in some fashion, while yet providing for the individual who is able to move faster than the others. To this end a minimum assignment is planned for all. Children of greater ability are asked to read more extensively, sometimes from adult books or magazines, or to do in some way a larger amount or a superior quality of work. In this way the child broadens his viewpoint and acquires the ability to do, in a simple way, a kind of independent work which is psychologically akin to research. By reporting the results of his investigations to the group, he clarifies his own thinking and sometimes stimulates his classmates to greater effort. It is the practice, whenever possible, not only to permit but to encourage the children to work and study together. This privilege is rarely abused and has been a direct aid in developing class spirit. The traditional schoolroom recitation has been abandoned. Instead, the children

and teacher gather about a round table for informal discussion, which is frequently led by a child. Here also occur the reports of individual problems, the outlining and organization of class projects, and the appraisal of group investigations. As a result of this method new problems arise and a constant interplay takes place between class discussion and the individual study period, each in turn stimulating the other.

To plan any but a flexible curriculum for gifted children would be analogous to putting a saddle and bridle on Pegasus. Either or both of two things will happen automatically when gifted children are permitted to take their own pace; namely, a speeding-up process or an enrichment of the course. Serious danger results from a mere speeding-up process, especially in the case of children of foolishly ambitious parents who take undue pride in rapid school advancement. To combat this evil, emphasis has been placed upon qualitative enrichment rather than upon accelerated progress, although both gains are made automatically when children are taught as individuals. The curriculum in use has been that of the regular grades, expanded and enriched to meet the needs of the various individuals. Much of the drill, explanation, and development necessary in teaching average children can be eliminated from the course of study for gifted children, who are able to deal with abstract material and to solve complicated problems with a minimum of assistance. For example, a girl of eleven showed through work which she did "just for fun," and unaided, that she could comprehend and use beginning processes in algebra. Because gifted children learn so much more easily and rapidly than average children, the time usually given to academic subjects has been decreased and extra-curricular activities have been introduced, including many problems involving creative work.

A simple type of research should be included in the curriculum. Examples of projects of this type which have functioned successfully in the opportunity room are the writing and producing of plays, including designing, drafting of patterns, making of costumes, and planning of stage settings and properties; and the organization of units of historical or geographical material, either as reviews or as methods of attacking new problems. These activities take the form of fairs, pageants, travelogues, or balopticon lectures, and consist of a series of carefully organized reports by individual children. The combined "lectures" form a well-organized and unified whole. Usually these reports are addressed to an audience — other classes, parents, student teachers, or teachers in the University. Children assume all responsibility for presentation of the programs, one of their own number presiding with dignity and decorum. In the preparation of these programs the members of the class plan together during one of the round-table periods described above.

After the assignment of units of work to individual pupils, one of two procedures follows. Each method is valuable; which is the more so is a question. In one case the child prepares his speech with no aid from the teacher except an examination and constructive criticism of the outline. Thus his report is almost entirely the product of his own thinking. In the other case the method used is coöperative; the individual presents his production to the class, who criticize and suggest eliminations, additions, or a better plan of organization. The children have been trained in the art of constructive criticism. They appreciate the obligation of the critic to improve the work which he criticizes, if the author is unable to do so. Aided by these conferences, the child revises his report and again appears before the group, which once more renders judgment.

The first method is valuable in developing the child's ability to work independently; the second functions as a socializing agency, stimulates to better endeavor, develops the child's power of auto-criticism, and increases his ability to profit from the criticism of others. This second method is employed constantly in the classes in oral English. Visitors have often expressed amazement at the significant criticisms given by children and at the fine spirit in which these criticisms are received. Few college freshmen speak with the ease and poise with which many of these children address an audience. On one occasion a nine-year-old boy "lectured" for twenty minutes to a group of adults and children. He moved about the room without apparent self-consciousness, illustrating his talk with pictures, charts, maps, and other demonstrational material.

Other activities functioning as enrichments of the ordinary curriculum are as follows: book publishing, including writing, illustrating, and binding; the making of various kinds of scrapbooks, such as pictorial reviews of given subjects (e.g., the World War); the making of illustrated geographical and historical books; collecting newspaper clippings in regard to current events or geographical or historical problems; typewriting; nature study; science; foreign languages, as low as the fifth grade; hygiene; tennis and various other activities. Full accounts of some of the projects and summaries of others will be found in Chapters X and XI.

There is no better method of enriching the program than to provide numerous opportunities for written composition, a type of work which should ramify through the entire curriculum. In general, gifted children possess an unusual command of English. By the age of nine or ten years they frame sentences with precision and show a mastery of style which is hardly equaled in the compositions of average high school students. The writer has frequently tested gifted

children of this age who attained the average adult vocabulary score in the Stanford-Binet test. Some give evidence of innate literary ability, expressing their wealth of information so fluently that one is reminded of Goldsmith's description of the village schoolmaster:

> And still they gazed and still the wonder grew,
> That one small head could carry all he knew.

Such expressions as "the policies of the government," "changing personalities," "the climax of a story," and "details of a composition" are frequently heard. Recently, when presiding at a student body conference, a girl of nine said, when a member of the group suggested formulating regulations controlling the conduct on the stairways: "Why do you need a rule for the stairways? You have already made rules for the halls, and a stairway is only a terraced hall." On another occasion, when the class was picnicking in Griffith Park, this same girl said, as they reached a promising height in their hike up Mt. Hollywood: "Don't you think it would be worth while to pause for a moment and admire the beautiful scenery? I don't know whether it is the heat or the effect of the atmosphere which makes the hills appear so lovely, but I must admire the harmonious blending of the shrubbery."

It is conceded that childhood is the time to learn a foreign language. Without doubt a curriculum planned for gifted children should make definite provision for this training. With regard to the linguistic ability of these individuals, Madame Cerf, Supervisor of French in the University Training School, makes the following statement: "My observation of the work of the children of the opportunity room has proved to me that gifted children stand out with regard to their grasp of modern languages (in this case French) and compare most favorably with older children in beginners' classes and with more advanced pupils of the eighth and

ninth grades. The group I have in mind started French with a student teacher. From the beginning they retained definite rules and tried to put them into use. Many times I saw the children call attention to mistakes which escaped the student teacher. In every case they were right. During the second semester I taught the class myself, reviewing the first semester's work in a systematic way, and was agreeably surprised with the progress the children made in a few weeks. I was leading them into the course of ninth-grade French, A and B. At the end of the term they could with credit have been put into these grades. Understanding of the language and ability to use it seemed to come to them easily. I believe this progress was due to their reasoning power; their questions showed a maturity of thought far above the average."

Gifted children are usually omnivorous readers; therefore the curriculum should include carefully planned bibliographies of the best literature in many fields. Books on astronomy, geology, nature, science, history, geography, travel, and biography, as well as the best fiction, should be available. Adult books and magazines are preferred by many of these children. It has not been necessary to supervise their reading very closely, as most of them come from homes of superior culture where the reading has been carefully directed by the parents. Those whose reading is unsupervised at home are stimulated to read good books by establishing contact with the public library, in the manner already described, and by book reports presented in the oral English class. The serious problem in most cases has been to secure books and poetry with which the children are not familiar. Recently a group of four, varying in chronological age from ten to twelve years, asked to be permitted to study *Julius Cæsar*, giving good reasons for their choice. It has been necessary in literature more than in any other subject

to plan special courses. The junior group do a type of work commonly done in the advanced sixth and seventh grades; the seniors that which is usually prescribed for eighth and ninth grades. However, this varies with the personnel of the classes, depending partly upon the social status of the pupils.

A question frequently asked is, "What effect has the opportunity room on the conduct of the children?" The answer is that discipline becomes an individual and self-imposed concern of all. It is the aim to teach civic understanding and right social attitudes through student-body organization and control. One member of the group holds the office of president-secretary, taking charge in the absence of student teachers and keeping the attendance and class records. He is elected by the members of the class as their leader and invested with authority which they respect. A committee assumes responsibility for the neat appearance of the classroom, but for his own conduct in the rooms and on the grounds each child is responsible. There is much freedom, but "freedom under law." It is understood that liberty and license are not synonymous terms. Children speak without raising hands and move without restriction about the room for purposeful reasons, such as consulting the dictionary and the wall maps or going to the bookcases; but they have set up a standard of conduct which prohibits talking when others are speaking, or committing any acts unlawful for the group. In classes in oral English a child wishing to speak rises and waits for recognition of the chairman or teacher before beginning. To abuse their freedom is to penalize themselves; therefore, as a rule, the self-imposed order is superior to the superimposed constraint of the average classroom.

It is not the intention of the writer, however, to convey the impression that the conduct of gifted children is uni-

formly perfect. Their very superiority sometimes makes the problem of control more difficult to solve than is the case with average groups. Some cases are very trying. On the other hand, the children respond to a situation which places the responsibility upon themselves and which permits them to establish their own standards of conduct. There is a certain informality as well as freedom. Tables and chairs replace the desks which convention has made the usual furniture of the school. It is the aim to make the environment coincide as closely as possible with situations in the home, in business, and in society. The children appreciate the privileges granted them. They seem to understand that because of their exceptional opportunities they should set an example in conduct as well as in class achievement.

Among the many objections voiced to the plan of segregation was the suggestion that the opportunity to advance regardless of the progress of the other members of the class might result in developing selfish, self-centered, egotistical children. An experience of five years with the class has amply demonstrated the fallacy of this argument. The writer has never known a group more loyal to classmates, teachers, and school than these children. This attitude has been developed by purposely stressing social projects and keeping always in mind that unity can exist without uniformity. Constant connection between the opportunity class and the school is maintained through the children's participating in the regular grade activities in such special subjects as domestic arts and manual training. Many social projects are constantly set up between these children and those of the regular fifth grade. Inter-class athletic activities, school plays, pageants, or projects of various kinds involving the entire school perpetuate a social relationship between the opportunity room and the school. In all projects of this type the children of the opportunity room are

more concerned for the reputation of the school than for their own prestige.

Another objection to the plan of segregation was that the health of the children might break under the strain of intensive study. In the beginning it required a good deal of ingenuity to deal with this problem, as many of the children were inclined to spend all their leisure time in reading. As a corrective, a course in the value of play, exercise, and care of the body was presented. The children, with their superior intelligence, responded well. Each child was given a report card upon which he was asked to record the time spent daily in play and physical exercise, the number of times the teeth were brushed daily, and the frequency of baths. Due to interest aroused in this course the problem was satisfactorily solved, the children taking great pride in keeping their records good. With the help of the physical training supervisor, Miss Blanche Kells, the work of safeguarding the children's health has been prosecuted diligently. Each child now receives a thorough physical examination each year. Reports of this are sent to the parents, with suggestions regarding diet, sleep, and exercise. Hygiene instruction planned to meet individual needs is a part of the program.

It is not unusual to find among gifted children some bookish ones who cannot play and who lack the qualities of sportsmanship. Children of this type in the opportunity room are taught to play and to participate in the physical activities of the school at large. On the playground and in the schoolroom they are taught to appreciate sportsmanlike conduct. A boy of ten, who from babyhood, according to his mother's testimony, had contemplated the play life of other children without ever making an effort to join in their games, became interested in play and was taught to play a good game of marbles, an equally good game of baseball, and to excel in tennis. Among the extra-curricular activities

established, none developed social consciousness more fully than the course in tennis. Miss Florence Sutton, the well-known tennis champion, took charge of this class from time to time and made many helpful suggestions to the children and to the student teacher in charge. The additional time devoted to play has in no way interfered with achievement in academic subjects. In fact, the physical exercise seems to have a stimulating effect on mental activity. The moral reactions are especially favorable, the good qualities developed on the playground being reflected in the general conduct of the children.

After an experience extending over five years, there is no question in our minds as to the value of segregating gifted children. No pressure has been brought to bear in regard to the amount of work accomplished, yet advancement has been more rapid than usual. This is an inevitable result when children are taught as individuals. Until last year, when definite measures were taken to prevent undue speed, the accomplishment was in most cases twice that of the average classroom; that is, two years' work in one. In some cases the child was permitted to do only a year's work, measured in terms of school grades, but measured in terms of qualitative enrichment of subject matter and extra-curricular activities, a year's work representing far more than the average accomplishment.

The first group in the opportunity room, the strictly experimental group, was composed of three classes: A fourth, B sixth, and A sixth. In the A fourth class there was a child from the third grade. At the end of six months all the members of this group had completed the work of the B fifth grade. In the same period, of the B sixth group consisting of five boys eight, nine, and ten years of age, four finished the work of the B seventh, doing in that time one and a half years' work. One completed six months' work in

all subjects except arithmetic and history, in which he accomplished the work of one year. The sixth-grade group, consisting of two girls, completed one year's work in all the subjects in the six months.

When economic conditions affect the time which children can spend in school, this rapid advancement is very desirable, for the time thus saved in the first years of their schooling may be just the thing that will make university training possible later on. When the time factor need not be considered, it is better, in our judgment, so to enrich the curriculum that gifted children will spend only a year or two less than the usual time in the grade schools and enter the high school at a stage of development when they are socially ready. However, this is a question which should be decided separately for each individual case. Many children are socially ready for high school at twelve; others are not. It would seem that the high school and the university, as well as the elementary school, must meet the needs of the intellectually gifted by the provision of special classes if these individuals are to receive the kind of education which will enable them to make the most of their superior abilities.

The case descriptions which follow are based chiefly upon data collected from baby-books, statistics compiled by parents, social histories, the writer's observation, Binet tests, and other psychological and educational measurements. In the interest of brevity, complete descriptions of only five illustrative types have been presented, with skeletonized descriptions of the other cases, including only children enrolled in the senior opportunity room for the school years of 1921–22 and 1922–23.

The writer has not attempted to follow the same outline in all cases, but has endeavored to present, first, the characteristic which distinguishes the particular case from others, and next the items which are deemed to be of interest from

a scientific standpoint. The same plan has been followed in the abbreviated descriptions. Aside from records of tests indicating the individual's power to get thought from the printed page, records of psychological tests only are included in the case descriptions, the records of educational tests being given in a later chapter on achievement quotients.

CHAPTER THREE

Case 1: R. W., a Musical Prodigy

R. W., a girl, called by musical critics a youthful Paganini or a future Maud Powell, is unique in personality as well as exceptionally brilliant. Her mother thinks that she could never have succeeded in the average classroom, because of an indomitable will which would brook no opposition and which gave her a tendency to dominate over others. She has consumed more of the writer's time than any other child enrolled in the opportunity room. It is doubtful, however, whether any other member of this group will contribute more to society than this child, whose career is now attracting wide attention among musicians.

R. W. is a facile learner in any field, but according to the judgment of her teacher, Gregor Cherniavsky, her gift for music is very exceptional. As a child she was read to or sung to almost constantly. Demanding innumerable repetitions of the same song, story, or jingle, she soon memorized many. When she was eighteen months old, she could sing one stanza of America. At three years of age she had a repertoire of thirty songs. At five she stopped singing and demanded instrumental lessons. Shortly afterward she began composing for the piano and studying elementary harmony. At six she gave several public performances, demonstrating skill as a pianist, knowledge of harmony, a keen musical ear, and some ability as a composer. Melodies which she composed at this age were commended by competent musicians. Being very imaginative and endowed with creative ability, she was likely to use anything which was read to her and which appealed to her fancy, as a theme for improvisation. Among the most noteworthy of her child compositions is a series composed at the age of eight,

illustrative of the characters of *The Christmas Carol,* entitled "Old Scrooge," "Marley's Ghost," "Tiny Tim," and "Scrooge's Early Love." Continued practice in musical composition and study of the piano soon developed R. W. into an exceptionally proficient little artist.

At eight she turned her attention to the violin and progressed so rapidly that after eighteen months of study she played before Mischa Elman, who predicted for her a brilliant future as a violin virtuoso if the superior quality of work continued. A year later Kübelik rendered the same opinion. Shortly afterward she executed a difficult concerto in public so well that she received flattering notices in a number of musical magazines. At eleven she was presented in a violin recital to the Los Angeles public by Mr. L. Behymer, who is accustomed to present only mature artists and who at that time had not sponsored a child musician for over thirty years. Upon this occasion she executed the following difficult program:

1. De Beriot . . . . *Concerto No. 1*
2. Wieniawski . . . . *Legende*
3. (*a*) Cui . . . . . *Orientale*
   (*b*) Wieniawski . . . *Mazurka-Kuyawiak*
4. Sarasate . . . . . *Zigeunerweisen* (*Gypsy Character*)

Her performance was not only enthusiastically received by the Los Angeles public, but it evoked also complimentary criticisms in the leading musical magazines of the Pacific Coast, Chicago, and New York. The following extracts from criticisms give some idea of the opinion of musical critics as to the worth of her performance:

Los Angeles Herald: This extraordinary young musician is given to almost as free expression of the depths of musical emotion as a fully mature virtuoso, and her technical qualifications are equally noteworthy.

Los Angeles Times: Her program at the Gamut Club recital indicated that the performer is a musician, and not simply another infant prodigy.

Pacific Coast Musical Review: If the recital R. W., highly gifted violin pupil of Gregor Cherniavsky, gave at the Gamut Theater may be taken as a criterion of her career, then she will count among the great mistresses of that instrument.

Musical Leader (Chicago): Last Friday evening Gregor Cherniavsky presented in recital his eleven-year-old pupil, R. W., at the Gamut Club. The little girl gave the following program . . . in a most astonishing manner and showed herself gifted in every respect; spring-bow passages, difficult harmonics, in fact, every difficulty, this little girl knew how to overcome with masterly technique.

Musical Courier (New York): The crowds of people had no terrors for the little violinist, who went steadily through a program that would have taxed a person twice her age. Her tone is full and steady, her technique remarkable, and it is evident from some very beautiful things she did that there is actual talent.

At this writing all arrangements have been completed for R. W.'s presentation in New York in the fall of 1923. She will be introduced by Hurok, manager of Gluck, Zimbalist, Pavlowa, Elman, Ysaye, Chaliapan, and others. Hurok usually presents adult artists, who almost without exception are foreigners. It is felt, therefore, that R. W. has achieved much in securing him as her manager. Press and publicity have not made her conceited. She is entirely unaffected. Applause amuses and praise bores her.

R. W.'s general educational history is as interesting as the story of her musical development. At three and a half years of age, when she entered a Montessori school, she could repeat faultlessly several fairy stories of six or eight pages containing numerous three-syllabled words. This memorizing had been entirely spontaneous and was accomplished without effort or assistance. The Montessori school failed to provide the food which her imagination craved, and as she derived very little benefit from attendance there she was

withdrawn after three months. For a time her education was continued at home, under the direction of her mother, who read innumerable fairy stories and myths to her. R. W. manifested no inclination to read the printed page, although she read music with facility before seven. At seven she was tutored daily for about six weeks, covering the first-grade course of study. After this her mother again directed her education, but without much regularity or system. Her program included spelling, composition, English, lessons in conversational French, and practice in the fundamentals of arithmetic.

In April, 1919, at the age of eight years and nine months, R. W. entered the B fifth grade of the State Normal School (now the Southern Branch of the University of California). In the following September she was transferred to the opportunity room, where she remained until January, 1922. At this time she left school for a while but returned the following September. In two and a half years of half-time attendance she had completed approximately three years' work in all the subjects except arithmetic. Privilege of half-time attendance was granted in order that she might give more serious attention to preparation for her life vocation, which is to be that of a violin virtuoso. To this end she takes four lessons a week and practices from three to four hours daily. In commenting on the half-day privilege, her mother writes: "R. is well, but not robust, and is so highly strung that the long hours of the ordinary classroom would have made her musical development impossible. She also requires a good deal of strenuous play to counteract the effect of her intense mental concentration while at work. This also has been made possible by the half-day privilege accorded her in the opportunity room."

R. W. seems true to the artist type, who as a class have noticeably peculiar idiosyncrasies. Had she been compelled,

as many artists have been, to obtain her education under the direction of private tutors and subject to the isolation thereby entailed, these characteristics would unquestionably have been greatly exaggerated. Indeed, she is temperamental, indifferent to public opinion, and very self-centered. Yet she craves the companionship of children and is intensely interested in plays and games. Through contact with children, made possible by the half-day privilege, a saner attitude has developed than would have been possible in a situation that failed to provide socializing influences.

Like many other original thinkers, R. W. is a nonconformist, refusing to travel the beaten path. School activities must meet her individual need or she fails to respond. As a little child she was permitted to take her own pace, for she did not need urging and would not tolerate restraint. But the impulse to achieve is strongly developed. Her accomplishments are the result of doing for the joy of doing. Endowed with a vivid imagination and with a facility of expression which is uncommon in a child, she does exceptionally good work in English composition. Other subjects of interest to her are history, geography, art, and all forms of creative work. Cooking, sewing, or any others of the strictly feminine accomplishments made no appeal to her until recently. She took no interest in vocal music at school, asserting that the student teacher's ear was untrue and that it would ruin her voice to sing under her direction. She insisted, too, that the violin and piano supplied her musical needs sufficiently. As we believed that education should be based upon interests and inborn capacities, those things for which she expressed an intense dislike were not included in her half-day program. The wisdom of this course has been demonstrated by a recent awakening of interest and by her voluntary study of subjects toward which she had formerly been indifferent.

Combined with her superior intelligence and exceptional artistic ability, R. W. possesses an extremely practical and boyish type of mind. She is enterprising, adventurous, and daring, preferring boys as playmates, or girls who are active and who enjoy games in which boys are interested. She is a skillful carpenter and has built two playhouses, overlapping the boards carefully, cutting out windows, and installing doors which hang on hinges and which can be locked. The furniture, too, was made by her. Recently she demonstrated her ability to fit a key to any lock by filing an old one into the required shape. She is an enthusiastic baseball player and an expert with marbles. At one time it was not unusual to see her playing marbles on the school grounds, the only girl among a hundred or more boys. It was conceded by the boys that she was a match for them in the game. She accepts and abides by the boys' code, plays as boys play, meets defeat pluckily, and asks no concessions or special privileges. When she read the Penrod stories, she immediately organized the neighborhood boys into a gang. Armed with spears, and with garbage-can covers for shields, they made nightly attacks on the other boys of the vicinity. She delights in climbing trees and porches. One summer the greater part of her time was spent in digging stairs in the bluffs of Redondo, and climbing as high as possible. Until recently her usual costume at home was either overalls or boy's corduroy knickers, a sweater, and a cap.

Some who followed R. W.'s career predicted that the day would arrive when she would voluntarily relinquish boyish pursuits, interest herself in more feminine accomplishments, and develop a respect for authority and pride in decorous conduct. That their prophecy was correct is borne out by recent events, described in a letter from her mother:

There has certainly been a most gratifying change in R. these last few months. A combination of circumstances induced her to give

up her boy chum and his older brother, also a playmate. I lay this to circumstances, but personally I feel the break was made possible by a change of mental attitude on her part. A revulsion seemed to take place, and she became quiet and mild. She read a good deal, practiced faithfully, took up embroidery, gave up her boys' clothes, — save on occasion, — developed an ambition to adorn her room, and went so far as to suggest that she save up to buy a book on etiquette! However, she still maintains that most girls are too tame for her, and she has not yet found girl friends to suit her. She has also developed a taste for talking with grown people. This change, which to my mind anticipates a physical change, is a great relief to me, and is, I hope, permanent. It has had a fine effect on her music, as she concentrates on her practicing now exactly like a grown person. Her ambition, too, is developing. She has developed in responsibility so much that we trust her like a grown person. She even took her small two-year-old nephew down town alone, a couple of weeks ago.

The writer can testify that the same improvement has taken place in her conduct at school.

At present R. W. prefers adult literature. Between the ages of three and seven she preferred fairy tales and mythology, King Arthur stories, stories of the Trojan War, and jingles; between seven and nine, fairy tales and stories of child life; between nine and ten, poetry, adventure, and humor. Since ten years of age she has read many adult books. When studying European geography, she became especially interested in France; so her mother gave her Runkle's *Helmet of Navarre*, Weyman's *A Gentleman of France*, and Stephen's *An Enemy to the King*, books which appealed to her craving for adventure. At this time she read also *The Count of Monte Cristo*. In connection with American history, she read Ford's *Janice Meredith*, Churchill's *Richard Carvel*, and Johnston's *To Have and to Hold*. Other books read during the past year include Klein's *Music Master*, Dickens' *Our Mutual Friend* and *Nicholas Nickleby;* Scott's *The Talisman* and *Ivanhoe;* Blackmore's *Lorna Doone;* and Jules Verne's *The Mysterious Island*.

As regards her taste in reading, her mother writes:

Dickens appeals to her sense of humor; she scarcely misses any of his points and thinks him inimitable. Adventure and battle appeal to her as to a boy. Quaintness, such as is found in *Lorna Doone*, appeals also. Style, she seems to appreciate keenly. Romance, however, makes no appeal at all unless joined with adventure or content.

School records in all subjects are either A or B, except in deportment and arithmetic. These have often been C. The recent change in attitude has resulted in a corresponding change in deportment, which now averages B. Her best work is usually done in social subjects and creative arts, her poorest in arithmetic.

In the Stanford-Binet test her scores were as follows:

C. A. 10–9;	M. A. 15–10;	IQ 147
C. A. 12–7;	M. A. 17–8;	IQ 140

Her records in each case were probably unfavorably affected by lack of interest in the examination. In the first examination she passed all tests through the fourteenth year with the exception of the clock test. The ball and field test was passed in a superior way. In the sixteen-year group she performed the interpretation of fables excellently, solved the problem of enclosed boxes, and repeated six digits backward. She could not reproduce the code at all. In the eighteen-year group she repeated eight digits in order. The writer feels she did not do herself justice in the vocabulary test, through lack of effort, although she exceeded the fourteen-year score by three words.

In the Terman Group Test, Form B, her score at the age of 12–4 was 160, which indicates a mental age of 17–2. In the Army Alpha Test, given at the age of 11–7, she scored 103, equivalent to a mental age of about 15–10 according to the Kohs-Proctor norms, or to 16–8 according to the Army psychological norms.

In the Monroe Silent Reading Test (Test III, Form 1) for high school pupils, she attained the norm of the tenth grade for rate and exceeded by eight points the norm of the twelfth grade for comprehension. In the Thorndike-McCall Reading Test, her T score was 64, which is .5 of a point less than the standard for the eleventh grade. Francis Galton showed that eminence runs in families and that one born into a family in which the members for generations have been eminent is likely to accomplish noteworthy achievements. The genealogy of this child is very interesting. Both sides of her family show a long line of men and women of superior mental ability — thinkers, musicians, poets, authors, scientists, philosophers, and lecturers. It is evident that her musical talent and creative ability are inherited from her mother's family. Her maternal grandmother had both unusual musical talent and executive ability, having been a prominent club woman and the organizer of almost every charitable institution in her home town. The child's mother, a musician of rare ability, is a university graduate and took her Ph.D. degree at Stanford University. The father is a Harvard graduate, an attorney at law, and a compiler and publisher of law books. He is descended in direct line from the first Lord Baltimore, Proprietor of Maryland. The paternal grandfather held important governmental positions, having been at various times United States consul-general to Brazil and Hawaii, United States consul to Mexico, Cuba, and Canada, United States Attorney-General, and member of the legislature in Arizona. He has also been active as a newspaper writer and lecturer. Among other exceptional relatives on the father's side are James Wilson and Charles Carroll, signers of the Declaration of Independence.

Since accomplishment in any field is determined not only by original endowment and inner growth, but by environ-

ment and training as well, it would seem that a child with this heritage and evident talent is worth unlimited effort, sacrifice, and concessions on the part of the school. To meet the needs of individuals of this type is one of the purposes of the opportunity room.

CHAPTER FOUR

Case 2: R. P., a Misfit in the Public Schools

R. P., a boy, was the most noteworthy example of a "square peg in a round hole" that the writer has encountered. He possessed rare capacity for continued mental concentration, was original in expression, and had a knowledge of science and literature beyond that of most boys of high school age. But he disliked school.

From a very complete baby book, kept by his mother until he was about ten years old, it was possible to secure exact information regarding his early childhood development and training. The following is the earliest entry of interest:

> Weight at birth, minus clothes, nine pounds.
> At three days old he lifted his head from the pillow.
> At ten days old he followed the doctor with his eyes so that the doctor commented upon it.

At fourteen months of age R. P. walked and first spoke intelligibly. From this time until he entered school his mother directed his education, basing it wholly upon the play instinct. She read to him and gave him systematic lessons daily, at first of about fifteen minutes' duration. Later the multiplication tables were taught through games which the mother originated and which the child played with zest until the response became instantaneous and automatic.

From the beginning he manifested unusual aptitude for intellectual games of all kinds but showed no inclination to participate in physical activity or out-of-door sports. This preference for intellectual games has persisted; the boy now plays a good game of checkers, chess, and cards.

At three and a half years of age R. P. entered a Montessori school, remaining three months. At four and a half he en-

rolled in a public school kindergarten, which he continued to attend until six. During this period his mother, appreciating his eagerness to learn, taught him at home also. Her guiding principles were, first, that children's questions should be answered with consideration and frankness; secondly, that the child's environment should stimulate a desire to learn. The child was keenly interested in pictures and stories and learned to read easily. Instruction was informal and incidental, and was given whenever the boy presented a book and requested another story.

At six he entered the elementary school, immediately skipping the first grade and half of the second. His mother encouraged him to progress at his own pace in school, realizing that much time would be wasted if he were compelled to lockstep with children of ordinary ability. She imputes the distaste for school, which developed later, to boredom resulting from being kept over-long at tasks that were too easy.

When he was about ten years of age, R. P.'s aversion to school grew so intense that his mother was impelled to take some definite action. The following excerpt from the baby book tells its own story:

> The first few months after school began, R. fussed and fussed about going. Every Monday morning he shed tears at returning. The teacher said he was dreamy and inattentive, but always knew his lessons. In oral work he wasn't listening enough to know when he was called upon. It was my judgment that he was bored. His unhappiness in school life was enough to justify some changes.

About this time the mother was advised to enroll him in our opportunity room. The mental test which all applicants for admission must undergo revealed a mental endowment probably not equaled by more than one child in several thousand. He was accepted. In a very short time he forged ahead of the group with which he began working in arithmetic and completed the course prescribed for the sixth

grade. Guided by suggestive assignments, he worked out the subjects of percentage and interest, in fact all of the arithmetic outlined for the seventh grade, almost unaided. The student teacher stood ready to help when needed; otherwise she kept in the background. By the end of the year he disposed of the work of two grades in all the subjects. Soon his antipathy to school vanished, as is evidenced by this entry in the baby book:

> R. has now been a number of weeks in the new class. He is voluntarily taking up French, and his class is dramatizing *Miles Standish*. He no longer complains about school. It is apparently a joy to him now.

This change, however, was not due entirely to the opportunity to determine his own pace in classroom work. From kindergarten days R. P. had been a bookworm, contemplating the play life of others, but not caring to participate in any kind of physical activity. When he attempted to engage in physical exercise, he was awkward and clumsy. His muscles were set and tense. He was slightly round-shouldered and walked in the manner of an old man. Spectacles lent an odd professorial aspect, which the other children recognized by dubbing him "Professor P." He was taciturn, morose, and non-social. He regarded the school and all connected with it as enemies. Yet he was a handsome lad, with a rare sense of humor. His eyes always shone and his face lighted up when he could get a joke on classmate or teacher. He soon perceived that his achievements in physical activities did not compare favorably with those of the other members of the opportunity class; so he asked to be excused from participating in an Indian War Dance which was to be a public performance. Gradually, however, through the coöperation of our physical training supervisor, Miss Blanche Kells, he became interested in athletics and learned to play, first, a good game of marbles, and secondly,

an equally good game of tennis.[1] Much of the rigidity, tension, and awkwardness which characterized his bearing has disappeared. An interest in play and physical activities has developed. There has developed, too, a sportsmanlike attitude, a social consciousness, an ability to coöperate, and a disposition at times to sacrifice his personal desires for the good of the group. His general health also has improved.

R. P. early demonstrated a spontaneous interest in composition, writing voluminously at times, merely for his own enjoyment. Specimens of these efforts recorded in the baby book reveal a fluency and originality of expression and a command of words remarkable in a child so young. The following letter, rescued by his mother from the waste basket, was written at the age of ten years and two months. It was one of several copies of a letter sent to a stamp agency.

Los Angeles, California,
Sept. 4, 1920.

Hussman Stamp Co.,

Gentlemen:

Please send me some approval sheets, their value being not above a dollar. I will not keep them as long as I did the last time. I am very sorry for the trouble you had last time. The truth was, however, that they were given into the care of my mother, who lost them in some way, and it was a long time before she consented to pay for them.

Yours truly,
R ——— P ———

For some time R. P. was busy writing intermittently of an imaginary country named Toadica. The following excerpt from one of his mother's letters describes this effort:

The Toadican story you ask about is something of which I could hardly make a résumé. I have just been to R.'s drawer, and find that his last copy, made in 1919, has about eighty typewritten pages.

[1] It is R. P. who is mentioned on page 18 as being given individual instruction in the art of batting a ball.

There have been a great many versions, and each new addition reflects in some way R.'s new interests. He told me this summer that the whole thing was "punk," and would all have to be rewritten if it was ever to interest any one.

It was begun when R. was seven. He covered scores of pages, lying flat on his stomach on the porch while writing. He was at it so continuously that I felt it might not be good for him. When he wasn't writing Toadica, he was telling it to the other children and making up games which they played in the characters of his story. That summer I got my typewriter and he wanted me to type the whole thing. It was too much of a task to proceed as he wanted me to do. I was learning myself, and he would suffer no inaccuracies. We did not get on very well. He begged to learn to write on the Corona himself. I thought him too young, and that he might get my machine out of order. I told him that if he would go through all the exercises that I had just been through, and learn to write in the proper way, by the touch method, I would let him do it. That did not daunt him in the slightest, and he used to work so long on the exercises that I had to limit him. He did not begin to type his story until he had been through all the exercises. You asked about the length of time spent in writing the Toadican story. I could not say, except that it has been a recurring interest for the last five years. R. wrote to C. from Catalina last week, and in the letter he mentions that he has thought of two new Toadican chapters. I have purloined the beginning of the book, and will send it to you with the baby book.

In the baby book is found the following comment by the mother:

R.'s criticisms later on this early draft of the Toadican story were good ones. He rewrote it, cutting out all of the numerical exaggeration, geographical measurements of no great interest, and all reference to America. If it was to be an imaginary country, it should not be mixed up with actualities! I notice also, that he left out American proper names, using purely fanciful ones. I never offered any criticisms on Toadica. His changes resulted from what he perceived himself.

The following is one chapter of the first part of the story, written in July, 1919, at the age of nine years:

TOADICA

Part IV

I will now tell you some of the early history of Toadica.

A flower fell off its stem. It turned into a Toad. The Toad looked at the sun which was going down below the hills. "I must have something to live in," she said, "for it may rain soon." She looked up into the sky and saw black clouds there. "I certainly must hurry up," she said. "Let's see, it would be safer to dig a hole for a home, for if I build a wood house above the ground everybody will see it." So she set to work to dig a hole. With her front paws she dug a very small hole, next a large hall. She divided it up into three sections, one a parlor, one a dining room, and one a kitchen. She made another room branching off from this hall which was to be a bedroom. She went out of the house, and brought in a dead tree, some dry leaves and two pieces of wood. She rubbed the two pieces of wood together for a long time to get fire and was just going to give up when a spark showed. The Toad set fire to the dry leaves, and then to the dead tree. The fire grew larger. She went outside and by accident found a sort of stone bowl that had been formed by the elements in some way. She put the dead tree in it. She gnawed down some more trees and put them on the fire. The fire grew so hot that she felt the heat ten yards away. In getting fuel for the fire, she stepped on something sharp. "Ow," she cried. She looked at what she had stepped on. It was a piece of iron. By accident, she dropped the piece of iron in the fire, which was so hot that she could not stand anywhere near it. After awhile by another accident, she overturned the stone bowl. Out streamed some metal iron. She made a mold of a hammer's head and poured the melted iron into it. She went and gnawed down a tree. She bit off one of the branches and brought it in her hole. At just before night she put her hand into the mold and pulled out a hammer head. She wedged it in as tight as she could. Then she had a good hammer. She made some nails out of iron in the mold, too. That night, before she went to sleep, she made a bed out of some poles. The hammer was of great use to her in driving some nails. She lay down on the bed and covered herself with leaves. It was raining outside. Then she went to sleep and slept until morning.

The description which follows was composed at school at the age of twelve years and five months.

A PERSONAL NARRATIVE

One evening, on the street car, a big fat man entered. It was during the rush hour, and only two empty seats were left in the car. On one of these seats, or rather on one and a half seats, the fat man sat down.

I then noticed something about his appearance. He was dressed in a neat green suit, which fitted very tightly, and looked as if it was about to burst. In sharp contrast to his suit was a flaring red necktie and then above the necktie was a pair of fat cheeks, almost as red as the tie. The shiny black top hat he wore seemed as if it would fall off any moment. But curiously enough, not once during the entire trip did it do so, and it must have been glued to his head.

Hardly had he taken his one and a half seats when a small boy entered. He was unmistakably a school boy, for under his arm, held together by a strap, were four brown books, among which was an arithmetic, a speller, and a geography. Without hesitation, he sat down beside the fat man.

The street car now moved slowly on through the traffic. After about two minutes, however, the car stopped, and the door opened to admit a timid, kindly old lady, who rustled her long black skirts as she wended her way cautiously among the seats. With her black-rimmed spectacles perched on the end of her tiny nose, she looked anxiously for a seat. As all the seats were filled, however, her search was in vain, and she stopped despairingly in front of the fat man. He, however, showed no intention of giving her his one and a half seats, and calmly continued reading his copy of the Examiner.

Then the school boy leaped into the breach. With a sweep of his hand he offered the old lady his seat. She hesitated and finally sat down. But what did she sit down on? Every one knows that old ladies are perfectly capable of filling an entire seat, but this particular spot was half a seat. The old lady could not quite squeeze on to it, and remained half on and half off.

But now the fat man, probably thinking that he had done enough at first by not giving his seat, made amends, partly, by yielding and the old lady slumped into his one and a half seats, at the same time winking vigorously at the school boy. Seeing no harm in doing so, he sat down in his former place. So the end of the whole matter was, the old lady and the school boy were left sitting, and the fat man was left hanging to a strap as the car jolted slowly onward.

A gift of eloquence, rarely equaled in a boy of his age, is a part of R. P.'s peculiar endowment. One feels that he has ideas and definite knowledge regarding the subjects on which he speaks. He commands the sympathetic attention of adults as well as of children, and his hearers are sorry when his speech is concluded. In dramatics or vocal interpretation of literature he projects himself into the characters which he interprets, with true histrionic art.

Like many highly gifted children, R. P., until recently, spent most of his leisure time with books. The record in the baby book shows the time spent in reading during the past five years to be as follows:

Age	Time per Week
7–8	15 hours
9–10	15 "
11–12	8 "

The diminution in amount of time during the last two years is due to interest in sports, fostered and encouraged by the school. At seven years of age, in imitation of his mother's example, he began compiling a list of all the books he had read, together with the name of the author and a short résumé, the length of this depending somewhat upon the interest which the story held for him. The entire list at the time of this writing, when he is 12 years and 4 months of age, includes 324 books. A partial list, giving an idea of the kind of books preferred at each age and of the precision with which R. P. writes, follows.

R's List of Books. Begun 1917 Age 7

1917

May

Rinkitink in Oz L. Frank Baum

(A boy prince, whose home and kingdom are devastated and his parents and every person on the island kingdom captured

and made slaves, with the aid of three magic pearls gains a happy ending.) (Baum himself gave me this book as a personal present. He died shortly after I received it.)

1917

SEPTEMBER

Just So Stories Rudyard Kipling

(This book is generally about how so and so came to be. For example: "How the Elephant Got his Trunk," and the "Beginning of the Armadillo.")

1918

SEPTEMBER

Lost Endeavor (with Mother) Masefield

(A tale of slavery, kidnapping, and robbery.)

1919

MARCH

Kidnapped Stevenson

(A boy is sent on a message to a person and is kidnapped by this very person. He then is sold to a captain of a ship, a pirate though, and makes friends with one of them. The two hold out long enough to escape when the ship touches land. They are then chased all over the country, and have many adventures, but land safe and sound at their destination.)

Toilers of the Sea (most of) Victor Hugo

(A very exciting, interesting story. In one of the chapters is a story telling of a frightful encounter with a devilfish! Some one was so affected by the picture that she or he wrote "Horrors!" beneath it. The man who kills the devilfish finds a skeleton of a man in an inner part of the gloomy dark cavern that was occupied by the devilfish!)

1921

DECEMBER

Martin Crusoe Bridges

(The most thrilling book I have ever read. Martin Crusoe, a young wireless operator, receives a message from the middle of the Sargasso Sea for help. He journeys there in an aëroplane and in the midst of the sea he finds two Islands. On one a professor and his aged servant live. They have their home in passageways throughout a great rock cliff, so that on the whole it is like a fortress. There is a lake on this island. Underneath the water there is a subterranean passage which leads out into the great sea of weed outside. Strange sea monsters come through this passageway into the lake.

On the second island live a race of old Norsemen who probably landed some time when the weed was not about. They are called Lemurians. They keep making constant attacks upon the fortress on the other island. There is a secret passageway in the rock through which the Lemurians sometimes get into the fortress in the cliff.

It is the most interesting book I have ever read. There are sea monsters, caves, earthquakes, and it is exciting all through.)

1922

FEBRUARY

Sargasso Sea Janvier

(A man is caught on one of the wrecks in the Sargasso Sea, the great sea of weed in the South Atlantic. He finally escapes by going from one to another of the rotted hulks, and then going through the weed in a steam launch, which he finds on board one of the vessels. He cuts his way through the weed with a saw, which he fixes at the head of his vessel, and as the ship goes he moves the saw. On one of the old hulks, a Spanish galleon of great antiquity, he finds bars of solid gold, and many precious stones, which make him rich when he gets to the outer world. When on one of the hulks, he hears a cry at night, and among other things finds skeletons fastened to chains, on a vessel he imagines to be a slaver. A very weird and interesting book.)

MAY

The Last Days of Pompeii Bulwer-Lytton

(One of the best books I have ever read. The hero of the story is a young Greek called Glaucus. It is very exciting all through, and in the last chapter, when the eruption occurs, it is just magnificent.)

In spite of his antipathy to school during the early years, R. P. consistently secured A or B (mostly B) in all the more strictly academic subjects. Since entrance to the opportunity room he has mastered the work of three years in two, with the handicap of decreased time allotment for the usual subjects and the addition of many other subjects. In physical training, manual arts, music, and deportment, school grades have often been as low as C, but in deportment he has earned B frequently and A occasionally. School marks would seem to indicate little or no dexterity in hand work. One must not lose sight of the fact, however, that all his manual work has been taken with the regular classes (eighth or ninth grades); consequently, his achievement has been rated in comparison with that of boys three or four years his senior. The difference in muscular development probably accounts for his inferior execution. Also manual dexterity is a special ability, and one in which R. P. has had no interest. In regard to physical training, it must be remembered that until very recently R. P. had no desire to excel in this field. Lack of interest in school music may be due to boredom, since the home furnishes opportunities for hearing much better music than any he can hear at school. The deportment record is affected by conduct in classes in which his natural interest is lacking.

In the Stanford-Binet tests, his records were as follows:

C. A. 10–8	M. A. 17–9	IQ 166
C. A. 12–7	M. A. 19–6	IQ 155 [1]

[1] The test was not adequate to measure his ability at this age.

In the first test he defined correctly 69 words, thus surpassing the average adult score. His definitions were rather unusual and were given very promptly. He made no attempt to define words with which he was unfamiliar. He passed the paper-cutting test and the induction test, giving the rule on the third folding. The code test was disposed of in three minutes and twenty seconds without a single error. The ingenuity test was solved slowly and carefully, each answer being given correctly the first time. All tests were performed thoughtfully.

In the Terman Group Test, his score at the age of 12–4 was 179, which indicates a mental age of about 18. In the Army Alpha Test given at 11–8 he attained a score of 126, equivalent to a mental age of about 17–6 according to the Army norms, or to 17–4 according to the Kohs-Proctor norms.

In the Monroe Silent Reading Test (Test III, Form 1) arranged for high school pupils, he exceeded in both rate and comprehension the standard score of the twelfth grade for the end of the year. In the Thorndike-McCall Reading Scale he exceeded the norm for the twelfth year by two points.

The parents are people of unusual intelligence and education. The home is of the artistic, cultured, and literary type. The child has been deluged with the finest things of life, including good music, art, and literature. The grandparents were of Norwegian, American, and English descent. The father's family is of Puritan ancestry, and has been traced back to 1620. They were active in civic affairs, and some of the members of the family played a prominent part in the French and Indian War and in the War of 1812. The father, a Harvard graduate, whose name appears in *Who's Who*, holds a responsible civic position in Los Angeles. His main recreational interests and hobbies are athletics and chess.

In chess he has a national reputation, having held the Harvard championship for four years. The mother, also a university graduate, is a student, writer, and musician of rare ability, and is active in public life. At present she is the secretary of a large woman's club consisting of 2400 members. She was at one time a member of the board of directors of the same organization.

CHAPTER FIVE

Case 3: L. A., Illustrating Linguistic Ability, Superior Intelligence, and Delicate Physique

Outstanding in the opportunity room for his ability in foreign language, is L. A., according to the testimony of the supervisor of French, Madame Cerf. She states that his command of the language is very remarkable with respect to pronunciation, memorization, and understanding of grammatical construction. His questions, she says, indicate a maturity of thought greatly above the average. In the first class in which he was enrolled there were several pupils two or three years older, who had studied French before but who did not show an understanding of the language at all comparable to his. At the time of this writing, at eleven years of age, he is one of a class of three pupils who are doing A ninth work. Although the other members of the class have had two years' preparation as opposed to his one, and are several years his senior, he is the most proficient pupil in the class. This progress Madame Cerf ascribes to his ability to reason and to his inherent interest in words and language construction. From the beginning he has voluntarily made constant use of Cassell's *French and English Dictionary*, which he found among his deceased mother's books, always available to him. Dipping into the Greek texts, at the age of eight, he formulated a series of codes from the Greek alphabet. With the aid of a Greek-English dictionary he undertook with great seriousness to read Greek, abandoning his attempt only when he was convinced that he could not translate it satisfactorily. It is not merely in the learning of foreign languages that his linguistic ability is shown; he has always been interested in the use and content of words, and has spent a great deal of time studying Straing's *Exercises*, a grammar of the old-fashioned type.

Instructed by his mother, L. A. learned the alphabet as soon as he could talk. His education was based primarily upon play, kindergarten and Montessori equipment being used constantly in all the child's activities. With the help of his mother he made letters of bread dough. Other sources used in learning the alphabet included building blocks, books, papers, magazines, billboards, and car signs — in fact, any printed matter found in his environment. One letter was taught at a time, with a very definite association. Only those letters were selected which were interesting to him because of their connection with some person or object. At the same time, also through play, he was taught to count. The child was so intellectually eager and alert that it was necessary to transmute all his play activities into educative projects.

At four years of age he began to read; at six he could read quite independently. Shortly before his sixth birthday L. A.'s mother died and he went to live with his aunt, who continued to teach him in accordance with his mother's policy. The aunt greatly facilitated his progress in reading by sending him typewritten letters. A little later, a few weeks of school instruction in phonetics gave him the ability to work out independently the pronunciation of new words. Of his own initiative, at seven, he began using the dictionary. As early as six and a half years of age he began reading newspapers and magazines. At nine he read the *Literary Digest* regularly with interest. Other magazines which have been popular with him at different times are *John Martin's Book*, *Saint Nicholas*, *The American Boy*, *Popular Mechanics*, and *The Youth's Companion*. At about seven, he read Thompson Seton's *Wild Animal Ways*, Kipling's *Just So Stories*, and *The Jungle Book* (many times), Hawthorne's *Tanglewood Tales*, Wiggin and Smith's *Tales of Laughter*, the Greek myths, and practically all the fairy stories and myths suitable for children of that age.

When L. A. was very young, his mother sought and found a Sunday School which gave well-organized Bible instruction. He was enrolled in this Sunday School and attended regularly for some time. As a result, an interest was engendered in Biblical stories which still persists, as is evidenced by his continuing to read the Bible of his own accord. He is particularly interested in passages relating to wars. In searching for these he makes intelligent use of the concordance.

Of equal interest are stories of travel, geography, history, and science. When studying Roman history, at the age of nine, he supplemented the juvenile histories of the schoolroom with Myers' *History of Rome* and other texts written for high school pupils.

By the age of nine years he had read a majority of the books commonly recommended by librarians for children of the seventh and eighth grades. Since then his reading has included much adult literature. Some of his favorites are: Irving's *Conquest of Granada*, *The Sketch Book*, and *Moorish Chronicles;* Poe's *The Fall of the House of Usher*, *The Mystery of Marie Roget*, and *The Raven;* Bunyan's *Pilgrim's Progress;* Wallace's *Ben Hur;* Sienkiewicz's *Quo Vadis;* Cervantes' *Don Quixote;* Dickens' *David Copperfield*, *Oliver Twist*, *A Tale of Two Cities*, and *Pickwick Papers;* Dumas' *Three Musketeers* and *Count of Monte Cristo;* Bulwer-Lytton's *Last Days of Pompeii;* Shakespeare's *Merchant of Venice*, *Midsummer Night's Dream*, *Comedy of Errors*, *Julius Cæsar*, and *Romeo and Juliet;* Lamb's *Essays of Elia;* Fouqué's *Undine;* Kipling's poems, including "Oonts," "Loot," "Tropin," "Gunga Din," "Mandalay," "Screw Guns," "Belts," "L'Envoi," and "The Galley Slave"; Kipling's short stories, including, "Baa-Baa Black Sheep," "His Majesty the King," "The Man Who Would Be King," "Drums of the Fore and Aft," "The Strange Ride of Morrowby Jukes," and others. This is a very small sampling

of his reading list, but it will give some idea of the quality of books he prefers.

L. A.'s method of reading when a little child was somewhat unique and interesting. He always insisted that his aunt read whenever he read. That they read different books was of no consequence. He was willing to discontinue reading at any time to discuss her book, claiming the privilege of interrupting her frequently to recount some of the interesting incidents of his story. Moreover, he demanded that she read all that he read, and that she discuss the stories with him afterward.

L. A. is naturally frail, nervous, and rather high strung. A severe attack of chorea, following influenza, at the age of eight, left him delicate and unable to attend school for more than half-day sessions until he was nine years old. Yet his progress has been rapid. He entered the kindergarten at five, attending intermittently for about a year, when he was promoted to the first grade. After three weeks he was advanced to the second grade. During that school year he completed the work of both the second and third grades, attending half-day sessions only. At the age of seven he was promoted to the fourth grade, where he attended irregularly for about six or eight weeks during the entire year. The following fall, in September, 1919, he was transferred to the opportunity room, where the half-day privilege was continued for a year. After that he attended full time, being given special opportunities for physical exercise. At the close of three years he had satisfactorily completed the work of four years in spite of decreased time allotment for subjects, extra-curricular activities, and the handicap of a delicate physique. At the present writing (age 11) he is taking the post-eighth-grade course mentioned on page 8.

L. A.'s school records in all the subjects except manual arts are A and B, with A's greatly outnumbering the B's.

He is not fond of or greatly interested in hand labor of any kind. However, his aunt testifies that he will do carpentry work for hours if only some one will work with him. He has demonstrated the ability to think out mechanical contrivances requiring careful fittings, but he lacks the manual dexterity to bring his plans to a successful culmination. It must be remembered in his case, as in the case of our other gifted children, that his manual work is always rated in comparison with boys who are three or four years his senior.

In regard to other school subjects, it would be difficult to say in which he does best. He works with the same facility with the abstract as with the concrete, deriving keen pleasure in solving intricate arithmetical problems and employing much of his leisure time in this way. In English and the social sciences his accomplishment is especially good.

All his school projects function at home. When he was engaged in making illustrated geographical books at school, practically all his leisure moments at home were employed in constructing books along other lines. Much time was spent in originating block prints of conventionalized book-cover designs similar to those worked out at school under the direction of an art teacher. In his endeavor to apply the art principles learned at school he persuaded his aunt to work with him at home, being most critical as to the accuracy both of her work and of his own. In all his activities he exhibits more of the power of auto-criticism than any other child the writer has observed.

In the Stanford-Binet test he earned the following scores:

C. A. 9–9;	M. A. 15–3;	IQ 156
C. A. 11–7;	M. A. 18 ;	IQ 155

At the first examination he passed all the fourteen-year tests, defining correctly fifty words. He stated the rule for the induction test on the third folding, and gave the answers

to the clock test almost instantaneously. In the average adult test he repeated six digits, solved the problem of enclosed boxes, and completed the code test in two minutes without a single error. It will be remembered that he had long been interested in formulating codes.

In the Terman Group Test his score at age 11–5 was 189, indicating a mental age of 18–6. In the Army Alpha test given at age 10–8 he attained a score of 130, equivalent to a mental age of about 17–8 according to the Kohs-Proctor norms, or to 17–9 according to the Army psychological norms.

In the Monroe Silent Reading Test (Test III, Form I) prepared for high school pupils he exceeded by eight points the norm for comprehension for the twelfth year, and the rate norm for the same year by fifty-one points. In the Thorndike-McCall reading test his T score was 77, five points higher than the standard norm for superior *teachers*.

Highly imaginative by nature, L. A. finds intense satisfaction in make-believe; consequently his performance in dramatic work is superior. As a tiny child, he delighted in hearing favorite stories again and again and took great pleasure in the repetition of ridiculous themes. At Easter, his favorite pastime was writing letters to Bunny Rabbit, to which his aunt replied. Long after becoming cognizant of the rabbit's mythical nature he refused to admit enlightenment, even to his aunt, and persisted in playing the game. Until ten years of age he was unwilling to abandon the fun of believing in Santa Claus.

By nature he is timid and rather reticent, especially with strangers. With friends of long standing he talks freely. He is friendly in his attitude toward other children, associating with them normally and playing with zest. By choice he plays with children, but he accepts adults cheerfully if children are not available.

From the beginning his mother subjected him to a strict

régime regarding sleep, diet, and recreation. This routine was continued by his aunt after the mother's death. Health has been considered of paramount importance, and his home education has been planned primarily to develop physical efficiency and to strengthen a naturally frail physique. In this the school has coöperated. As a result he is now stronger physically than the most sanguine observer would have predicted when he entered the school.

L. A. is of English-Dutch and English-Irish extraction. The mother, a graduate of the University of Chicago, was a distinguished student, especially gifted in languages. Elementary report cards still in existence show that she received "A" records in nearly all subjects and grades. She also ranked first in all her classes in high school. The maternal grandparents are rated as exceptionally superior, possessing at seventy and eighty years of age, respectively, keen minds. One uncle and two cousins on the mother's side are regarded as superior. The paternal grandparents are well-read and cultured, the grandmother at eighty-seven years of age being alert and interested in all that goes on about her. The father is a high school graduate. He has engaged in various commercial and mechanical pursuits and is at present a fruit rancher.

CHAPTER SIX

Case 4: K. D., a Child of Uniformly Superior Mentality and Unusual Manual Dexterity

K. D., a girl, exemplifies that infrequent combination of superior mental endowment and unusual adroitness in manual and fine arts. This special gift expressed itself as early as three years of age, when the child spent hours daily in an older brother's carpenter shop, contentedly pounding tacks into patterns. Later she made articles of wood. From early childhood she made all her doll's clothes. At present she makes and trims her mother's hats. Although K. D. is only self-taught in this art, she produces, as the writer can testify, results comparable to the work done in a good millinery shop. She has made herself expert in the manufacture of artificial flowers by visiting shops and examining their wares and duplicating them. Even such homely accomplishments as sewing and cooking interest her exceedingly, and she works with the same facility in these as in the finer arts. In these subjects her school records are consistently A.

K. D.'s mental development was exceedingly precocious, according to her mother, who testifies that she spoke plainly and with meaning at one year of age. Her mother says also that the child gave evidence of markedly exceptional intelligence at four years of age by continually asking significant questions regarding her surroundings and by her ability to understand comprehensive explanations, to reason, and to remember.

She is possessed of an unusual zeal for knowledge and is one of the most studious children of the opportunity group. She has the ability to concentrate for long periods on difficult intellectual problems. She reasons logically and displays rare judgment and common sense. One of her most striking characteristics is the resourcefulness and persistence

shown in overcoming obstacles. All difficulties are attacked with determination. As a result of her mother's desire that she shall establish beyond doubt her ability to attain as high academic records as those secured by certain superior relatives, the child is completely imbued with the ambition to excel in school.

Perhaps K. D.'s most noticeable characteristic is the abandon and intimacy with which she converses with adults. No doubt this attitude is partly due to continued association with older people and especially to the constant companionship of her mother, who has always made of her a confidant and chum. The mother's policy has been to respect the child's opinions as she would those of a superior adult and to talk to her as if she could understand and reason. Consequently the child possesses a remarkably extensive vocabulary. At times her language is almost pedantic. This verbal fluency is also probably an outcome of her habit of omnivorous reading. Frequently she has demonstrated the ability to reproduce almost verbatim, after one reading, the content of technical scientific subject matter that would tax the memory of superior adults. However, there is no evidence that this gift is the result of practice.

As regards early training, her mother had no definite plan other than to surround her with good literature. She was read to a great deal from the age of eighteen months. She never attended either a kindergarten or a Montessori school, but entered the first grade at the age of five years and four months, where she learned to read very quickly.

Her progress through school has been rapid. She skipped the second grade and half of the third. At eleven years of age she entered the opportunity room and began working with the A seventh group. At the end of the year she had completed the eighth grade. In addition to the extra-curricular activities in which all had been engaged, she had taken

a course in typewriting with the ninth grade. It is interesting to note that the teacher in the commercial department consented with reluctance to admit K. D. to this course, declaring that she would be unable to do the work satisfactorily. Later the teacher reported that K. D.'s progress compared favorably with that of the other members of the class, all of whom were several years her senior. At present she is attending a junior high school in another city. A copy of her third-quarter marks just received by the writer shows only A's and B's.

K. D. has a strong liking for school and a wide range of interests. School records have always been A and B in all subjects, with A predominating. She meets her only Waterloo in dealing with the mechanics of arithmetic, in which she makes careless errors. The thought subjects are easy for her. She demonstrates uncommon linguistic ability, which, from indications in the family tree, is probably inherited. Subjects of greatest interest are history and science, including geology, astronomy, and zoölogy.

From childhood she has had access to a large public library, besides possessing a library of her own. The latter consists at present of over two hundred books of the best editions, beautifully illustrated. Before she was five her mother read to her such books as Kipling's *The Jungle Book*, children's astronomies, fairy stories (both classical and modern), and legendary lore of many lands, including Greek, Roman, Norse, British, French, Dutch, and Irish. The mother has not compiled a list of the child's reading, but the following are typical of the books she enjoys: *Tales of King Arthur's Court*, *The Story of Siegfried*, *Parsifal*, *The Search for the Holy Grail*, *Life of Napoleon*, *Wild Animal Ways*, *Kim*, the Louisa Alcott books, *Twenty Thousand Leagues under the Sea*, *Ivanhoe*, *Quentin Durward*, and many biographies of famous men and women, including kings, queens, artists, musicians,

and famous statesmen. Before nine she read Marshall's histories of England, Rome, France, and Scotland, as well as a large volume of Barnes' *History of the United States.* Her mother states that she enjoyed these books as much as she enjoyed story books, if not more.

Although such a serious student, K. D. is popular with other children and plays normally. Her attitude toward her playmates is affectionate and cordial. She associates with children of her own age preferably, but is fond of all children, assuming toward those who are younger a motherly oversight and interest. She is a good leader, but is willing to follow the leadership of others when necessary. A veritable little dynamo of energy, she addresses herself to physical games and activities with the same vehemence with which she approaches intellectual pursuits and attains corresponding results. She swims and dives well, performs with ease on a trapeze and rings, and is an unusual tennis player and an enthusiast at basket ball. In all competitive games she shows good sportsmanship.

By nature, K. D. is sunny, likable, happy, and interested in everything and every one. She is quick in speech, vivacious, impetuous in manner, and refreshingly individualistic. She has had none of the usual children's diseases, and her health is exceptionally good. She is good-looking, attractive, and unaffected.

The Stanford-Binet test record was as follows:

C. A. 12; M. A. 16–9; IQ 140

She passed all the tests through the sixteen-year level, excepting the code test. She defined correctly seventy-two words, just missing the superior adult score by three. The quality of her definitions was greatly superior to the standard. In the superior adult test she repeated the digits forward and backward and repeated almost verbatim the thought

of both abstract passages. In the Army Alpha test given at age 11–10 she secured a score of 124, equivalent to a mental age of 17–4 according to the Kohs-Proctor norms, or to 17–6 according to the Army psychological norms. In the Terman Group Test her score at age 12 was 155, indicating a mental age of 16–11.

The genealogies on both sides of K. D.'s family have been published. On the mother's side she is descended from an old Dutch family which intermarried with the Van Rensselaers, Schuylers, and other old Knickerbocker families. The family traces its descent from Peter Stuyvesant. The maternal grandmother, an excellent French and Latin scholar, was a gifted school teacher. The mother's living brothers and sisters are all interested in public affairs. One sister (sixty-one years of age) is mayor of the town in which she lives. Four of her six children are university graduates. The women, for the most part, are teachers; the men are civil and electrical engineers. The maternal grandfather was a mine superintendent and at one time civil engineer of the American Express Company. There are twelve cousins in this branch of the family, all of whom are successful teachers, engineers, or business men. The mother speaks fluently both German and French. She attended the Western Reserve University for one year. Two years of travel in Europe followed. It was her intention to complete her university education, but marriage interrupted her plans. After the loss of a son in the World War, followed very shortly by her husband's death, she resumed her education at the University of California, Southern Branch, where she did exceptionally good work. She is now studying at the University of California and, although over fifty-one years of age, expects to continue her study until she secures a Ph.D. degree. No economic need exists for this course. It was planned partly to keep from dwelling on her sorrow, but primarily because of interest in intellectual pursuits.

K. D.'s father was descended from one of the numerous pioneering families who crossed the plains in 1851 and settled in Oregon. The paternal grandmother was the "Mother of Woman Suffrage" in Oregon, the editor of *The New Northwest*, the president of the Woman's Club of Portland, the author of several books on suffrage, and a public speaker who espoused the cause of equal suffrage for nearly fifty years. The child's great uncle, one of the most brilliant and able editorial writers in the United States, was editor for forty years of the *Portland Oregonian*. A great aunt is also known as an able editorial writer. The paternal grandfather had only a grammar school education. It is said, however, that he had a natural interest in medicine and that in early days he was frequently called upon by his neighbors to attend the sick. He was highly esteemed and respected, and it is probable that had he been given professional training he would have been a successful physician. The child's father, who is deceased, was a graduate of Cornell University and Law School. He was an exceptionally able lawyer, gifted as a public speaker, devoted to his profession, deeply interested in all questions of civic welfare, and intensely patriotic. His only living brother is now president of a college in one of the Rocky Mountain states. In this branch of the family are six cousins, all of whom are regarded as exceptionally brilliant. The occupations common in the father's family include newspaper management, editorial work, authorship, and public speaking.

CHAPTER SEVEN

Case 5: E. B., the Child Possessing the Highest IQ Yet Reported, 214

E. B., a girl, entered the eighth grade of the Sentous Junior High School, Los Angeles, at the age of eight years and eleven months. Shortly afterward she moved into the vicinity of the University Training School and was transferred to the opportunity room. We are indebted to Miss M. Frances Martin, assistant supervisor in the psychological department of the Los Angeles city schools, for the following summary of E. B.'s records in mental tests:

Stanford-Binet Test, September 13, 1922

Chronological Age	8 years 11 months
Mental Age	19 years 1 month
Intelligence Quotient	214[1]

Analysis:

Years		Months
XIV	14 (basal)	168
XVI	("Adult")	25
XVIII	("Superior Adult")	36
	Total	229 = 19 years 1 month

E. B. passed every test of the 14-year level, every test of the 16-year level, except the code test, and every test of the 18-year level — thus breaking the scale. The quality of her responses was far superior to the acceptable standards.

Miller Mental Ability Test

Chronological Age	8 years 11 months
Total Score	86

The Miller Mental Ability Test was given in Los Angeles in April, 1922, to teachers applying for positions. By way of comparison the following results are of interest:

[1] The IQ may have been affected to some extent by previous familiarity with the tests.

Regular Elementary School Teachers — Median Score . .	88.2
Special Elementary School Teachers — Median Score . . .	77.2
Regular Secondary School Teachers — Median Score . . .	94.5
Special Secondary School Teachers — Median Score . . .	86.6
Median Score of 694 Teachers	87.5

(Signed) M. Frances Martin
Assistant Supervisor

E. B.'s mother states that she first spoke words with meaning at seven or eight months of age and that she walked at ten months. A copy of the results of the first test of any kind given E. B. was furnished us by Dr. B. T. Baldwin of the State University of Iowa. This was a sort of vocabulary test given in Baylor University, for a class in experimental psychology of which the mother was a member. E. B. was sixteen months old at the time. She was brought to the class and permitted to wander around the room and talk as little or as much as she pleased. The students, excluding the mother, wrote down all words spoken by her, continuing the test for three consecutive days for one hour daily. The record included 159 different words.

The reproduction of *Cinderella* which follows was, Dr. Baldwin states, written June 19, 1919, by E. B. during a lecture which her mother was attending. It was written on the child's initiative purely to amuse herself while she waited. This circumstance explains its incompleteness. E. B. was then five years and nine months of age.

Cindrella

Once upon a time a rich man had a good wife and a daughter. One time the wife got sick and died. Shortly after he married again. This time he married a haughty woman. Her two daughters were just as hauty as herselve.

"They made the poor girl do all the work in the house. They made her sweep the floor and dust the chairs.

They made her wash the dirty pots and dishes and dry them. The poor girl bore it all patiently. one day the Prince gave a ball. All the young ladies of the city were invited to it. Of course our young misses were invited to it.

This was a new trouble to Ceinderella, for she was the one to iron their linens and pleat their ruffles.

"I shall wear my velvet dress," said the elder, "and I shall wear my train all covered with diamonds," said the other.

They talked of nothing but of how they should dress. At last the day of the ball came. Ceinderella asked to dress their hair. While she was dressing their hair the elder

When E. B. was three years old her parents discovered that she knew the alphabet, which she seems to have learned by asking questions about printed signs. Indeed, she has had very little formal instruction at home, for her mother has been active in newspaper work most of the time, usually working at night. The only help the child has received from her mother has been in correction of her speech, discussion of books, and encouragement to express her thoughts freely, especially in writing.

At four, E. B. entered kindergarten, attending six weeks. At four and a half, she was placed in a convent school on account of her mother's going to France as a war correspondent. She was not enrolled, but was permitted to sit with the high first grade when she wished, because her little chum sat there. In four months, when school closed, it was discovered that she could read any page in the reader which had been used as a text and any page in the public school first reader which she had never seen before. Accordingly, although lacking two months of being five years old, she was promoted to the second grade. One week after entering the second grade in the following September she was promoted to the high second, although she had not studied at all during the summer. She had read a good deal, however, notably Grimm's *Fairy Tales*, Hans Christian Andersen's *Fairy Tales*,

Stevenson's *Child's Garden of Verses*, and animal stories such as *Peter Rabbit* and those of Ernest Thompson Seton.

At the close of the school year, in June (at the age of five years and nine months), E. B. was promoted to the fourth grade. At this time she was given her first mental test at the Iowa State University by Miss Eloise Vest, then assistant to Dr. B. T. Baldwin. We are indebted to Miss Vest for a copy of the examination given on the following page. Dr. Baldwin was present part of the time and assisted in making the examination.

Before school opened in September, — that is, before E. B. was six years old, — she had read practically every book listed by the public library at Des Moines for children for the first six grades. Reluctantly the librarian permitted her to go to the seventh-grade shelves. At this age she had read a majority of the books in the library on mythology.

When E. B. was eight, her mother was in the hospital a month. E. B. stayed in the apartment entirely alone, taking her meals next door. During this time, to amuse herself, she began reading *The Child's Book of Knowledge.*

She has been unrestricted in her choice of books. Surrounded with the best literature, she has naturally selected that kind, but when she wanted to read what is commonly called "trash" she was permitted to do so. This she usually discovered was trash and discarded it. Although her taste is rather sophisticated, she still enjoys stories for children, especially college and boarding-school stories. Her favorite books at the age of nine years include: Barrie's *The Little Minister*, *Sentimental Tommy*, and *Tommy and Grizel;* Hugo's *Les Misérables;* Dickens' *Oliver Twist*, *Our Mutual Friend*, and *David Copperfield;* Kipling's short stories and complete poetical works; Dumas' *The Three Musketeers;* Eliot's *Silas Marner* and *The Mill on the Floss;* Bunyan's *Pilgrim's Progress;* Hutchinson's *If Winter Comes* and *This Freedom;*

IOWA CHILD WELFARE RESEARCH STATION

RECORD BLANK FOR CONSECUTIVE MENTAL EXAMINATIONS BY THE STANDARD REVISION OF THE BINET TESTS

Name: E. B. Date of Birth: Sept. 21, 1914

Examination No.	1	2	3	4	5	6
Date of Examination	6–19–19					
Examiner	E. Vest					
School Grade . . .	4 B					
Chronological Age .	5–9 mo.					
Mental Age . . .	10–1 mo.					
IQ	175					

TEST	1	2	3	4	5	6	A
III	X	X	X	X	X	X	
IV	X	X	X	X	X	X	
V	X	X	X	X	X	X	
VI	X	X	X	X	X	X	
VII	X	X	X	X	X	X	
VIII		X	X	X	X	X	
IX	X	X	X	X	X	X	
X	X			X		X	
XII						XA	
XIV							
XVI							
XVIII			X				

General Impressions on Each Examination.

Drew with left hand. Very quick responses. Reads very rapidly. In 4th B grade. Attended school 11 months. Couldn't read before. At 16 mon. in 3 hrs. (1 hr. each day) 159 different words used.[1] Never has been tested before. Reads 12 library books a week.

[1] Test described on page 61.

Shakespeare's *Midsummer Night's Dream*, *The Tempest*, and *Romeo and Juliet;* Masefield's *Daffodil Fields*, of which she has memorized long passages; Tennyson's poems; Coleridge's *Ancient Mariner; The Rubaiyat of Omar Khayyam;* Emerson's essays; and standard books of Greek, Roman, and Scandinavian myths. This is only a sampling of what her mother designates as a very incomplete list of her reading.

Until she entered the opportunity room, E. B. never had a child companion and was unpopular with children. Her attitude toward them has always been eagerly friendly, but shy. She has been unable to make social adjustments. Upon entrance to the opportunity room, she was not "received." The children stood aloof, shrugged their shoulders, and did not hesitate to express contempt for her achievements. They tolerated her because they had to. This continued for about a month. In the meantime we took the children into our confidence, stating E.'s case — the fact that she had never had companionship of children or the opportunity to learn to play — and asked them to help her. As a result, she is now a member of a club composed of the girls of the class, is included in their activities, and is learning to skate, play tennis, and make social adjustments of greater importance to her than progress in academic subjects.

Until recently she has been too sensitive to be happy with other children because of inability to comply with their play standards. Otherwise, she is cheerful, affectionate, and considerate to the point of self-denial. She obeys implicitly, but is forgetful in the commission of small duties, perhaps because engrossed with more interesting matters. She thinks along economic and political lines and can hold her own with many adults in conversing on these subjects.

Physically, she is the personification of good health. She has had the usual children's diseases, but has recuperated very quickly. Her mother has carried out a rational physical

régime. E. B. has always been put to bed at regular hours, and at nine years of age she retires at eight-thirty. She has never been permitted to eat between meals and has always been given a strictly balanced diet.

Although it is E. B.'s ambition to be a writer of fiction and poetry, until recently she has been too indolent to do the necessary work connected with writing. Lately, a keen interest seems to be developing and she composes something every day. She "philosophizes" in her writing and is much more interested in the abstract than the concrete. When she was eight years and two months of age, she won the Sweepstakes Prize in the National Book Week Contest at Austin, Texas. She was one of three preliminary winners of the sixth grade in which she was enrolled, and one of two hundred contestants in the finals. The subject of her composition was "Books I Want for Christmas and Why." It was written as a theme in the English class under the supervision of the teacher; hence, no outside help was possible. According to the written report of the three judges awarding the prize, her composition was given first place because of its "charm and imaginative quality."

Neither E. B. nor her mother valued this or other productions enough to preserve them. Recently we suggested that in the future all her written work be preserved, and as a result we are able to reproduce a few of her compositions done as school exercises or for enjoyment at home.

The Sign of the Arrowhead

(Written by E. B. at the age of nine years, one month as a theme in the English class, after she had read and discussed a number of Indian legends.)

In the San Bernardino Mountains there is an arrowhead made of a peculiar growth of shrubbery that is not seen anywhere else in the mountains or in their vicinity. There are many stories told of this arrowhead and this is only one of perhaps a million.

When the Lion tribe was first living in this country, they were very ill-fated. Every day when a hunting party would set out, only a few would return. One day Chief Muggywah (which means big man) went to the village prophet and asked him if this fate would continue. The prophet told him that a great chief would be born named Arrowhead, and he would deliver his tribe from this terrible fate. . . .

Many years have passed. This old prophecy comes back to the chief's squaw as she sees her baby. For upon his breast is imprinted an arrowhead like any other birthmark! The baby was taken to the priest. The holy man fell on his knees before it, proclaiming that it will be the deliverer of his tribe. When the village heard this, there were feasts and dances in joy at the good news, for still their best and bravest were being killed every day.

Arrowhead's childhood was pure. During the whole period he never committed a sin. When he passed the realm of childhood, and entered that of manhood, he was a source of unceasing wonder on the part of the village at his manliness and strength. He was pointed out to the children as their moral. The little girls named their dolls Arrowhead.

One day a hunting party set out to procure venison for the tribe. Arrowhead had begged hard to go, but his father had made him stay at home. When the hunting party returned, they carried with them the body of Powaman, Arrowhead's best friend. Arrowhead was so overcome that he decided to go into the forest and pray. He stayed there many days, praying and crying out "Oh why was Powaman killed?" One night he heard a strange voice say, "Arrowhead is deliverer of his tribe. Come to Black-Snake cove tomorrow and see how you can do it."

The next morning Arrowhead wonderingly obeyed the mysterious voice. When he arrived at Black-Snake cove, he saw a monstrous personage reclining on the floor of the cove. Seeing his amazement, this personage smiled and said, "Fear not, Arrowhead, for I am of good intent." In the forest to the west there is a great band of beasts. These are the ones who are killing your people. You shall overcome them but shall not live to see the victory." So saying, he vanished.

Arrowhead, still wondering, returned to the village where he selected twenty men and gave them each a bow and quiver of poisoned arrows. Thus equipped, he set out. When they arrived they had a hard time killing the beasts, but at last they overcame

them. But the last beast of all crushed Arrowhead under him as he came down.

When they returned there was much grief, for all the people loved Arrowhead. In memorian they decided to plant over his grave some plants in the form of an arrowhead. The tribe hunted around till they found some plants lighter in color than the rest of the vegetation. These they planted over his grave so as to make it stand out.

Many years later, when the children of the village saw this, and asked what it meant, they were told the story of Arrowhead and what he did for his tribe.

A Fairy Story

(Written at the age of nine years, one month, for recreation at home.)

Mary Jane Peters was never understood by her family. Never, I say, *never*. They had always been the most matter of fact family in the community. And here comes a child who believes in fairies! Of all the surprising things, this was the most. In the first place Mary Jane was *not* wanted. Maybe this accounted for it, but anyway she believed in the little inhabitants of forest and meadow.

She had many big brothers and sisters, but these were always working around the big farm, so she had plenty of time to cultivate a belief in almost anything that would offer her something to think about. Her astounding belief started this way. She was a very imaginative child, and as she sat under the big oak tree that she used as a playhouse, she would hear the wind murmuring through the branches and would imagine it to be the voices of little people calling her.

Her mother had done all she could to discourage her, but still she persisted. One day as she sat under the oak tree, she fell asleep. When she awoke it was to find that she was resting on a tree. Looking about she discovered that it was really a stalk of grass. Delighted at the novelty of being as little as the people she dreamed of, she slipped down and ran about exploring. Once she approached the old oak tree and saw that a piece of bark was loose. Wondering that she had not seen it before, she ran to it and examined it. It was curiously carved and as she approached it she saw that it let into a sort of hall. She entered by the door, for so it seemed, and gave a gasp of astonishment.

For the hall had gems set in it for ornamentation. She walked down it and saw it led to a far more beautiful room than she had ever

imagined. The room was cut out of a single, large ruby. In the center of the room was a beautiful fountain, set with every variety of precious stones, which reflected the light in rainbow shades. At one end of the room was a throne made of a single diamond. Around the throne was a band of fairy musicians, filling the air with their sweet music. In the pool of water made by the fountain there were dancing a number of dainty fairies, so perfect and beautiful that you could hardly believe they were alive. On the throne were two fairies clothed in silken mists. These were the king and queen of the whole tribe of those dainty people called fairies.

The king, catching sight of Mary Jane, beckoned her to come nearer. "Mary Jane, you are now a member of that band of people which mortals call fairies. Your name is no longer Mary Jane, but "Thracia," he said.

He then motioned her to sit down upon a little stool near the throne and watch the dance. The fairies danced on the surface of the water like bubbles. On and on the dance continued, the never-tiring fairies flitting like butterflies. It was like a thousand capricious winds blowing one flower in an effort to uproot it.

"Thracia," said the king, "Try your skill among the dancers. Up, out of this, muse." She sprang up from her low stool and took her place in the dances. In an effort to outdo them all, she astonished even herself. Words cannot describe the gracefulness with which she moved. Her arms were as white butterflies, flitting among the flowers of the court. Even the best dancers retired, outdone by this amateur at the art of moving poetry.

When she had finished, a person who had sat still all the while, sprang up and moved toward the king. After a few moments of whispered conference, the king asked Thracia to come to him. He told her that Dyphene, the best dancer of the court, wanted to try against her in a dancing match. "Oh, Thracia," he implored, "Do not try your skill against hers, for surely you will suffer the ignominy of defeat."

Thracia drew up proudly. "My king, I will try in a fair contest against anybody." Reluctantly, the king let her go, for surely, he thought, Dyphene will conquer and she will be banished from my kingdom. Sadly he looked up at the dancers. But soon the clouds of sadness gave way to a smile of joy. For Thracia was conquering. Like a lily her body moved, but I must not go into rapsodies over her for I might forget to go on.

But, Hark, what rang in the distance? It was the bell that the

faithful watchers of the king rang to let him know that Mary Jane was wanted. "Go Thracia, for 'tis your mother calling you." Hastily Mary Jane ran through the hall and outside and woke up to find it all a dream!

Sadly she hunted for the door of bark but it was gone. Then, the realization of the full truth swept over her and she wept bitterly. Then a butterfly came. Slowly flying, slowing resting on a bit of broken bark. Though she knew that she would find no door to fairyland, she ran back to her scolding mother, comforted in the thought that in the kingdom of her mind, she could still be Thracia, still dance with Dyphene, and still see the lovely pool dance.

THE END

A Busy Thoroughfare

(Composed at the typewriter, in the presence of the author of this book, in about ten minutes, at age nine years and two months.)

The crowds were thick around the box-office of the Cosmopolitan Theatre in Brooklyn, New York. The day was one of the sultriest of the summer. The fierce sun was beating down upon the crowded streets and the crowds were seeking the coolness of the big theatre as a last resort. The poor ticket girl had to call in two assistants to take care of the vast crowds. The manager had to repel the crowds because the vast theatre could not hold them. The rest of the crowds disgruntedly turned away from the closed doors of the theatre and went away to seek other comfort than that of a crowded theatre.

E. B. is now, at the age of nine years and four months, doing eighth-grade and post-eighth-grade work. Her marks in academic subjects are usually A. In manual work, cooking, and sewing, she grades low, for she has had practically no training in these skills. She reads incessantly, prefers literature of the superior type, loves to memorize poetry, and is something of an authority on mythological lore.

In the Monroe Silent Reading Test for High School Pupils (Test III, Form 1) she secured a score of 151 in rate and 72

in comprehension. The standard for the twelfth grade is 151 for rate and 32 for comprehension. In the Thorndike-McCall Reading Test her T score was 87, which is 15 points higher than the mean attained by superior teachers. In the Army Alpha Test given at age of nine years and four months her score was 157, indicating a mental age of 19–6.

In the light of this record, an examination of E. B.'s family tree will be interesting. She is of French, English, and Scotch descent. The father, who finished high school at thirteen, worked in a printer's shop after school hours from eight years of age until twenty. He was an A and B student in the university, taking gold medals for original composition. He has worked for years as a writer and editor. The paternal grandparents are rated by the mother as very superior. The grandfather is a lawyer, teacher, and the author of considerable published fiction and verse. The grandmother has considerable mathematical ability.

E. B.'s mother entered school at eight and completed high school at fifteen. At fifteen she entered business college and completed the course in less than three months. She then entered college, worked her way through, making consistently A records. She was editor of a national magazine, *The People's Popular Monthly*, Des Moines, Iowa, at twenty-five, and is at present editorial writer on the *Screenland* magazine, the only national motion picture magazine published in California. The maternal grandfather's history is unknown. It is said that he was probably average. The other members of his family are rated as mediocre, but the great-grandfather appears to have been intellectually superior. There were no schools in Texas where he lived as a boy. At twenty-one he could neither read nor write. However, just at this time a public school was established near his home; he entered, and finished the course for the entire eight grades in sixteen months.

CHAPTER EIGHT

Cases 6 to 16

Case 6: P. T., a good, all-round student

C. A. 11–8;	M. A. 17–1;	IQ 146
C. A. 12–9;	M. A. 18;	IQ 141

P. T. is a child with a typical Madonna face and was at one time chosen by a teacher of the art department as a model for that type. Unusually large and strong physically, she possesses self-control and poise equal to that of a cultivated adult. She has a rare sense of humor, the ability to read and comprehend involved abstract subject matter, and unusual power of concentration.

P. T. entered school at six and completed the eighth grade at 12–10, although she was out of school one entire year from illness. Except for an occasional B, she secured A grades in nearly all the subjects and completed the work of three years in the two she was enrolled in the opportunity room. She attains about a seventeen-year score in all educational tests.

No formal instruction was attempted at home, and P. T. did not learn to read until she entered school at six. She then learned to read very easily and was soon reading in nearly all of her leisure time. No restrictions were imposed; she read what she liked, chose good literature, and after the age of nine preferred to read "adult" books.

She has made several collections of wild flowers and butterflies, is interested in music and art, and is gifted with a very true, beautiful voice. She plays very little and is easily bored by other children, although they seem to like her and frequently choose her as a leader and as arbiter in their disputes.

P. T. is of English-Scotch and Scotch-Irish descent. It

is a striking coincidence that both father and mother left school at the age of fourteen, thereafter supporting both themselves and their parents. The father continued his education in the Y. M. C. A. night school and in university extension classes, studying commerce, law, and public speaking. He now holds a position of trust and honor in a bank. The mother has educated herself by reading and can hold her own in conversation with the average college graduate.

In both branches of the family there are inventors; the great-grandparents on each side are rated as having exceptional ability.

P. T. is a delightful, charming child, with high ideals and standards. She is looking forward to a college career, in which it is safe to predict she will make a superior record.

Case 7: G. G., a child who, through going his own pace, made up the time lost during an absence of two and a half years

C. A. 11;	M. A. 13–9;	IQ 125
C. A. 12–11;	M. A. 15–6;	IQ 120

G. G. is a charming little gentleman, to the "manner born." In thinking power he is sure rather than quick. Before school age G. G. received almost no formal training, but from the time he was a small child stories of mythology, nature, history, the Bible, and Shakespeare were read to him. The parents taught him chiefly by answering his questions and by encouraging him to think out things for himself, to try to understand why rather than to memorize.

G. G.'s parents say that he manifested at an early age the ability to comprehend almost any subject presented, either in language or pictures. He rarely asks for assistance in school work, and then asks only such questions as will enable him to understand and do for himself.

On account of a serious illness G. G. left school at the end

of the B fourth grade, remaining at home two and a half years. During that period he did no school work of any character. Upon his return he entered the opportunity room and worked with the sixth-grade group in all subjects except arithmetic, which he took with the fifth-grade group. At the time of this writing, a year and a half after he reëntered school, G. G. is completing, without pressure, the B eighth grade. He is exactly where he would have been at the normal rate of progress had he lost no time. He has secured only A and B marks, doing as well in manual as in mental work. In mental and educational tests his performance is fairly even, indicating an acceleration of from two and a half to three years.

G. G. is now physically strong, although a little underweight. He is interested in play, especially in swimming and tennis. He is greatly interested in electricity and wireless, and in inventing mechanical apparatus. His leisure time at home is spent either in this way or in reading.

G. G. is of German and Scotch-English descent. Both parents are college trained. The father is an able attorney. At one time he was assistant attorney-general of Missouri.

Case 8: Z. B., a child with marked histrionic ability, but with an IQ less than the standard required for admission to the opportunity room

C. A. 10–6;	M. A. 11–6;	IQ 109
C. A. 12–7;	M. A. 13;	IQ 110

Z. B., known as the "Baby Bernhardt of the Screen," was before the motion-picture camera at the age of three. At four she became a stock member of the American Biograph Company. At five the Universal Film Company contracted with her for four years at $100.00 a week, at that time the highest salary ever paid to a child in motion pictures. She was given a director and a company, and cast as

a star in *Gloriana*, a five-reel feature. In this she established her claim to the title of "youngest leading lady on the screen," and was starred in numerous two and three reel features, working under the direction of E. Mason Hopper at Universal City. She appeared in an all-star cast of a *Kentucky Cinderella* and co-starred with Thomas Jefferson in *The Beloved Liar*.

At five this child actress owned her own automobile, and at nine she had $20,000 in the bank.

Z. B.'s talent manifested itself as early as two and a half years of age, when she mimicked every one, living imaginary parts in all of her play, even to the extent of making her dolls act.

She was given no formal school instruction until the age of eight, when a tutor was employed. At nine she entered the A fourth grade of the University Training School; at ten and a half she was transferred to the opportunity room, where she has since remained. During these two years she has completed the work of two and a half grades, continuing at the same time lessons in piano and dancing in partial preparation for her life vocation, that of an emotional actress.

Z. B. was admitted to the opportunity room because of her special talent, although not securing the IQ required at the time (125). It was felt that the methods of the class would benefit her and might develop some abilities that were lacking. Such has been the case. Grades in academic subjects are usually B, with some A's and an occasional C. She has overcome to a large extent a tendency toward verbosity and an inclination to bluff. She has developed also a finer taste for literature and has grown in social grace and poise.

Both parents are of French extraction. The father left school at the end of the fifth grade, the mother at the end of the eighth. There is no record of any of the grandparents'

completing more than four or five years in the grammar school. The writer feels that there must be innate superiority, for both parents have unusual character, ideals, ambitions, and an appreciation of nature.

Case 9: C. P., a born diplomat

C. A. 9–5;	M. A. 13–2;	IQ 139
C. A. 10–7;	M. A. 14–10;	IQ 140

C. P., a handsome, lovable boy, is the brother of R. P. (Case 2). His charming personality and unusual diplomacy win the friendship of all. His mother testifies that from early childhood he frequently escaped punishment through his grace and tact.

C. P. entered kindergarten at four and a half years of age, and the second grade of the elementary school at six. At ten years and five months he is completing the A sixth, with A and B marks in most subjects. C grades are usual in hand work. He is rather phlegmatic by nature and not nearly so ambitious to excel as is his brother. It is the writer's opinion that his school accomplishment is not entirely commensurate with his ability.

He has had the same training as R. P. He plays normally, but is not as intensely interested as his brother in winning. He has excellent health, is superior in mental and moral traits, and possesses the attributes of speech and manner consistent with the influence and training of a home of culture.

Case 10: L. G., a child with marked linguistic ability, literary power, and histrionic talent

C. A. 10;	M. A. 15;	IQ 150
C. A. 12–10;	M. A. 18–1;	IQ 140

L. G. entered the first grade at seven years of age. At twelve and a half she entered the eighth grade, although she was absent from school for nearly a year and a half on account

of traveling. She now is doing eighth-grade and post-eighth-grade work with A and B marks. She is a prolific writer. Themes which she improvises compare favorably with those of the average university freshman.

The Binet test revealed a vocabulary score exceeding the superior adult level by three points. Her definitions were far superior to the standard. In interpreting the picture of the colonial home she said: "It is a picture of Napoleon and Josephine. Napoleon is telling Josephine that he is going to leave her because she has not presented him with a child. Napoleon is sorry and Josephine is heartbroken." In the Thorndike-McCall Reading Test her T score was 81, which is 9 points higher than the norm for superior teachers.

Before six L. G. received no formal training, although she was read to a great deal. After six much time was spent in traveling and mingling with people of culture. She was given also a considerable amount of private instruction in dancing and music.

After learning to read she spent most of her leisure time with books. She still does so, although when with other children she plays normally. She has a charming personality and is popular with her classmates. She is physically strong and well.

For L. G. study is the most fascinating way of employing time. She is at her best in English, foreign languages, dramatics, and written composition. It is her ambition to be a writer.

L. G. is of Irish-English ancestry. Her mother is an exceptionally intelligent woman and a graduate of Bryn Mawr. The maternal grandfather, a Harvard graduate, prepared boys for Harvard University. A great-great-uncle of the mother founded West Point Academy.

L. G.'s father was a successful engineer. He superintended the installation of waterworks and sewers and the

construction of bridges. In his family were able men of affairs, including lawyers, judges, and mining engineers. In the light of the child's histrionic ability it is interesting to note that in both branches of the family are found orators, readers, and actors.

Case 11: R. D., a quiet, retiring lad who excels in thinking ability

C. A. 9–11;	M. A. 14–6;	IQ 147
C. A. 11–11;	M. A. 16–6;	IQ 138

At four R. D. surprised his parents by demonstrating his ability to read simple stories. From the time he was two years old his grandfather and his mother read to him for about fourteen hours weekly. He says that he learned to read then, memorizing the words of the stories read to him.

His early development was precocious. At nine months he began to walk, and talked in short sentences. He entered school at about six years of age and was placed in the A second grade. At eleven he is doing high seventh work, with A and B marks. He tests high on all educational and mental tests, showing an acceleration of about four years. In the Army Alpha Test, taken at 10 years 11 months, he scored 100, indicating a mental age of about sixteen years.

His particular hobbies are wireless, nature study, writing, and dramatics.

R. D. is of Scotch-Irish and French descent. The mother is college trained; the father completed only the eighth grade, but is a successful business man. He is now president and owner of a large real estate business in North Dakota.

Case 12: H. R., a child with very superior intelligence who was excellently trained at home until ten

C. A. 10–5; M. A. 17–6; IQ 168

On the Christmas following H. R.'s second birthday he received several A B C books. He preferred these to toys and set out to learn to read. He ran constantly to his parents with papers or books, pointing out letters which he knew. Finally his father began explaining the capitals and small letters. In a very short time the boy was reading intelligently. At four years of age he was reading such literature as Andersen's *Fairy Tales*, *Æsop's Fables*, and a number of Longfellow's poems, including *Hiawatha*. At that age he went to the library himself and selected his books. His parents state that at this time he read the newspaper daily, running through an ordinary article without stumbling. Soon he was using dictionaries, encyclopedias, and reference books of all kinds. At seven he began reading *The Child's Book of Knowledge*.

Until ten years of age he was tutored chiefly by his father. However, he was given very little supervision and was allowed to choose his reading unrestricted. At this age he entered the A sixth grade of the University Training School and was transferred in a few weeks to the opportunity room, where his work is entirely of A grade.

H. R. has appeared on the screen in a number of features and his work is rated as unusually good. He has received favorable mention by dramatic critics for parts taken in plays presented by the Hollywood Children's Community Center, notably *A Midsummer Night's Dream*, in which he enacted the part of Quince.

H. R. is of English-French and Irish-German extraction. There is nothing very unusual in his heredity. Both father

and mother are normal school graduates. More distant relatives seem to have had rather meager educational advantages for the most part, but they trained themselves and attained to a certain amount of leadership.

H. R. plays normally; is a fine, manly, dependable lad, delighting in work. Without pressure he will probably be ready for the high school by 11–6.

Case 13: J. L., a boy with intellectual hobbies

C. A. 12–3; M. A. 15–1; IQ 129

Due to much traveling, J. L. has attended school regularly for only one and a half years. He was never tutored, but he taught himself to read before five and has been left free to choose his own books. His favorite books have been animal, pirate, and adventure stories. Since the age of ten he has shown a deep interest in biographies of famous characters and in the history of armor. The writing of history stories, especially the history of the armor of all periods, is one of his hobbies. Other interests include illustrating his own stories (chiefly stories of soldiers), modeling in clay, visiting museums and studying collections of antiques, and collecting stamps, rare coins, and pictures or toy models of soldiers of all nations.

At 12–3, J. L. is enrolled in the A sixth group of the opportunity room. He is doing good work in the social subjects. In arithmetic, spelling, and penmanship his performance is below the norm for his age. This, no doubt, is due to the lack of regular drill and organized instruction. He plays normally, is well liked by other children, and is a manly, attractive lad.

Both parents are of Jewish extraction. The relatives on both sides have followed the usual commercial pursuits of

the Jewish people. The father of J. L. is vice-president of a large national motion-picture corporation and general manager of the western branch.

Case 14: J. B., a good all-round student

C. A. 9;	M. A. 13–3;	IQ 147
C. A. 10–11;	M. A. 15–6;	IQ 142

J. B. entered school at five and a half years of age. At nine he entered the opportunity room. At ten years and eight months he is doing A seventh work, with A and B grades. He does his poorest work in physical training, in which he has no interest. He delights, however, in unsupervised play.

The results of the educational and mental tests indicate a fairly uniform acceleration, ranging from three and a half to four and a half years. In the Monroe Reading Test for high school pupils he exceeded the norm for the tenth grade in comprehension. In the Thorndike-McCall Reading Test he attained the norm for superior teachers.

J. B. had received no formal instruction at home before entering school, other than being taught the alphabet and the reading of numbers. His mother read to him and told him stories. He is rather phlegmatic in nature and lacks imagination. Physically he is active and well.

The family is of Spanish and German-French descent.

Case 15: M. C., a gifted child who is also a born leader

C. A. 10;	M. A. 14–8;	IQ 146

M. C. showed such marked ability as a leader and innovator in play activities that she attracted the attention of one of her neighbors, a teacher in the University Training School, who reported the case to the writer and suggested that she be tested for the opportunity room.

M. C. is of French-Italian parentage and is exceedingly dark-skinned. Although she hears only French spoken at home and did not know a word of English until after three years of age, she exceeded at the age of ten the vocabulary score for the fourteen-year level (Binet Test). Perhaps as significant was the fact that she repeated the thought of both of the abstract passages in the superior adult test. In educational and mental tests her performance indicates an acceleration of three to four years.

At the age of ten M. C. is doing exceptionally good work in the A seventh grade. She could probably be advanced one year and still do very satisfactory work.

The father makes his living by playing the violin in an orchestra employed in a motion-picture theater.

Case 16: J. W., a potential scientific genius

C. A. 12–2; M. A. 17–1; IQ 140

J. W. has made such a serious study of radio that he is regarded by some as a scientific genius. He has in preparation a series of twelve speeches dealing with radio, each speech treating of a different phase of the subject. Seven of the twelve have been completed and have been delivered before appreciative audiences of adults and children.

J. W. did not talk until he was eighteen months old, when he began speaking short sentences distinctly. At four he drew pictures of battleships anchored in the Hudson, coloring them with water-color paint. At five he began making toys, especially airships, from anything at hand. At ten much of his time was spent in studying radio.

The theories in regard to child training which have guided the mother's educational efforts have included answering the child's questions as fully as possible, teaching him to think for himself, talking and reading with him, and visiting

places of interest. J. W. was not sent to school at the usual age because the teachers and methods used did not meet the requirements which the mother had in mind. At the age of seven he was put in charge of a skillful tutor, who encouraged him to set his own standard of progress. As a result he was ready, at the age of eight, for the B fifth grade. During his ninth year, due to the separation of his parents, he had no teaching but employed his time in visiting libraries and in reading books of history, travel, and invention. During his tenth year he and his mother traveled constantly. When he was eleven they settled down in Washington, D. C. Again he remained out of school, spending his time in art galleries, museums, state buildings, the Senate, and Congress. Here he met statesmen, scholars, students, clerks, and diplomats.

In the fall of 1921 he enrolled in a Friends' school. This was the first time he had attended school for an entire year. In 1922, after an unhappy experience in the regular grades, he entered the B seventh grade of the opportunity room. In a few weeks he had progressed to the A seventh, carrying at the same time some B eighth work. J. W. is an indefatigable worker in subjects which interest him, such as science and history. The tool subjects make no appeal and he is inclined to shirk them.

On his father's side J. W. is of Hebrew descent; on the mother's, of Irish-German and English-Scotch. The father, a high school graduate, is a successful merchant, broker, and promoter. He has held many positions of trust, such as director and manager of a large oil company, president of a chamber of commerce, and others of equal importance. The family is one of superior culture. J. W.'s mother says that the paternal grandfather could read the Koran in the original.[1] J. W.'s half-brothers and half-sisters are college graduates.

[1] The writer has checked up the accuracy of these statements and has evidence that they are true.

One half-brother, who completed his education in universities in France, Germany, and Switzerland, is said to speak eight languages. The father's relatives are in most cases successful business men of the usual Jewish merchant type. The mother, a college graduate, was a teacher and has always been interested in civic welfare. At various times she has held positions of honor and trust.

CHAPTER NINE

Measures of Intelligence and School Attainment

The testing program in operation in the opportunity room includes two classes of tests; namely, tests measuring intelligence and tests measuring school attainment.

THE INTELLIGENCE TESTS

The usual procedure has been to give both individual and group intelligence tests. The individual test used is the Stanford-Binet; the group tests, the Army Alpha and the Terman Group Test of Mental Ability.

In the administration of the intelligence tests the writer was assisted by Dr. C. W. Waddle, professor of Education and supervisor in charge of practice teaching in the University of California, Southern Branch, who gave and scored the Army Alpha and some of the Stanford-Binet tests. Valuable assistance was also rendered by Miss Helen Bouton.

Table I on the following page gives the intelligence scores of the sixteen children reported in Chapters III to VIII inclusive.

THE EDUCATIONAL TESTS

Besides several well-known standardized educational tests, the Stanford Achievement Test was used. The latter proved especially valuable because of the highly reliable measure it affords of the individual child.

With the exception of the reading tests, the educational tests were given and scored by Mr. Thomas E. Thompson, supervisor of the Junior High School of the University of California, Southern Branch, and by Mrs. Helen B. Keller, who is in charge of testing in the training school of the same institution. Mrs. Keller also checked all the statistical work

TABLE I

RECORDS OF INTELLIGENCE TESTS

Subject	Binet			Binet Retest			Terman Group	Army Alpha
	C. A.	*M. A.*	*IQ*	*C. A.*	*M. A.*	*IQ*		
Case 1	10–9	15–10	147	12–7	17–8	140	160	103
Case 2	10–8	17–9	166	12–7	19–6	155	179	126
Case 3	9–9	15–3	156	11–7	18	155	189	130
Case 4	12	16–9	140	——	——	——	155	124
Case 5	8–11	19–1	214	——	——	——	182	157
Case 6	11–8	17–1	146	12–9	18	141	165	126
Case 7	11	13–9	125	12–11	15–6	120	109	62
Case 8	10–6	11–6	109	12–7	13–11	110	112	74
Case 9	9–5	13–2	139	10–7	14–10	140	80	71
Case 10	10	15	150	12–10	18–1	140	151	121
Case 11	9–11	14–6	147	11–11	16–6	138	135	100
Case 12	10–5	17–6	168	——	——	——	179	131
Case 13	12–3	15–11	129	——	——	——	116	74
Case 14	9	13–3	147	10–11	15–6	142	109	85
Case 15	10	14–8	146	——	——	——	112	112
Case 16	12–2	17–1	140	——	——	——	110	68

done by the writer in connection with the tests. In every case the procedure prescribed by the authors for giving and scoring tests was adhered to strictly.

The miscellaneous tests, other than the Stanford Achievement Test, included the following:

1. Monroe Silent Reading Test, III, Form I (prepared for high school pupils)
2. Thorndike-McCall Reading Scale, Form 3
3. Woody-McCall Mixed Fundamentals, Form II
4. Trabue Language Scale B
5. Charter's Diagnostic Language Test, Form I
6. Modified Ayres' Spelling Test (arranged by the Los Angeles City School Department)

The scores attained by the opportunity-room pupils exceeded the norms in all subjects. In both reading tests and in the Trabue Language Scale B the mean of the group exceeds that of high school students about to graduate. In all other subjects the mean is higher than the norms for the eighth and ninth grades. In many cases individual scores were considerably higher than the above-mentioned norms. Table II, on pages 86 and 87, and the summary which follows give the most important results.

The significance of the average scores attained in the opportunity room in comparison with norms will not be appreciated by the reader unless he bears in mind the fact that the opportunity room comprises several grades as compared with one grade in the average classroom. The classification of the members of the opportunity room at the time the tests were administered was as follows:

Grade	No. Enrolled
A 6	3
B 7	1
A 7	5
B 8	3
A 8	2
Post 8	2

The child is classified in the group with which most of his activities function. The child may work in one group or in more than one. In the social subjects, English expression and literature, it is not usual to have more than two groups. Sometimes all work together, as in classes in public speaking and the writing of poetry.

The opportunity-room group is too small and too highly selected to make a comparison of the mean of the group in the various tests with the norm really significant. In fact, the wide range of the group makes it difficult to find a basis for comparison. However, it no doubt will be of interest to the

TABLE II

RECORDS OF EDUCATIONAL TESTS

Subject	Age	Grade	Monroe Silent Reading Test III, Form I Prepared for High School Pupils				Thorndike-McCall Form III	
			Rate	Norm for Grade	Comprehension	Norm for Grade	T Score	Norm for Grade
Case 1	12–7	B8	86	[1]	40	[1]	64	59.6
Case 2	12–7	Post 8	125	—	54	—	68	61.5 [2]
Case 3	11–7	Post 8	151	—	49	—	77	61.5 [2]
Case 4	12	A8	137	—	62	—	81	60.9
Case 5	8–11	B8	151	—	72	—	87	59.6
Case 6	12–9	A8	151	—	72	—	81	60.9
Case 7	12–11	A7	86	—	29	—	68	58.3
Case 8	12–7	A7	86	—	34	—	72	58.3
Case 9	10–7	A6	137	—	34	—	54	53.7
Case 10	12–10	B8	151	—	56	—	81	59.6
Case 11	11–11	A7	151	—	45	—	68	58.3
Case 12	10–5	A6	151	—	70	—	68	53.7
Case 13	12–3	A6	109	—	24	—	52	53.7
Case 14	10–11	A7	86	—	40	—	72	58.3
Case 15	10	A7	86	—	29	—	59	58.3
Case 16	12–2	B7	86	—	28	—	68	56
Mean	——	——	120.6	—	46	—	70	——

reader to examine this summary, in which the writer has in every case compared the mean of this group with the highest standard norm available in each test. The norms used are those found in the latest manuals of directions for the various tests.

SUMMARY AND COMPARISON

The Monroe Silent Reading Test III, Form I

(Prepared for high school pupils)

	Standard Norm	Mean for Opportunity Room
Grade XII	rate 100	rate 120.6
Grade XII	comprehension 32	comprehension . . . 46

TABLE II (*Continued*)

RECORDS OF EDUCATIONAL TESTS

Woody-McCall Mixed Fundamentals Form II		Charter's Diagnostic Language Test Form I		Trabue Language Scale B		Modified Ayres Spelling Scale	
Score	Norm for Grade	Score	Norm for Grade	Score	Norm for Grade	Score	Norm for Grade
28	29.3	25	22.3	16	14.1	56	52.4
33	31.5 [2]	34	[3]	20	15.2 [2]	60	55.7 [2]
33	31.5 [2]	28	[3]	18	15.2 [2]	60	55.7 [2]
34	29.3	35	22.3	20	14.6	60	54.4
31	29.3	30	22.3	19	14.1	59	52.4
34	29.3	35	22.3	19	14.6	59	54.4
26	27.4	30	18.9	20	13.6	52	50.3
34	27.4	24	18.9	16	13.6	60	50.3
30	25	25	16.5	17	12.6	56	44.7
33	29.3	31	22.3	18	14.1	60	52.4
32	27.4	25	18.9	20	13.6	58	50.3
33	25	28	16.5	19	12.6	60	44.7
25	25	15	16.5	15	12.6	26	44.7
32	27.4	24	18.9	17	13.6	59	50.3
28	27.4	28	18.9	18	13.6	56	50.3
29	27.4	25	18.9	14	13.1	56	47.5
30.9	——	27.6	——	17.8	——	56.6	——

[1] This is a high school test; therefore there are no comparable norms for these children.
[2] Ninth-grade norms.
[3] No norms for grades higher than the eighth.

Thorndike-McCall Reading Scale, Form III

Standard Norm	Mean for Opportunity Room
High 12 . . . . . T score 68.1	70
Superior teachers . . T score 72	

NOTE. Five children exceeded the group norm (70), earning 72, 72, 77, 81, 87.

Woody-McCall Mixed Fundamentals

Standard Norm	Mean for Opportunity Room
High 8 . . . . . 29.3	30.9

Trabue Language Scale B

	Standard Norm	Mean for Opportunity Room
High 12	. . . . . 17.4	17.8

Note. All except four earned a score in excess of the standard norm for the twelfth grade.

Charter's Language Test

	Standard Norm	Mean for Opportunity Room
High 8	. . . . . 22.3	27.6

Note. All earned scores in excess of the standard norm quoted except Case 13.

Modified Ayres Spelling Test

(Arranged by the Los Angeles City School Department)

	Standard Norm	Mean for Opportunity Room
B 10	 59	56.6

Note. This mean was affected by the record of Case 13, a newcomer who had had almost no training in how to study spelling. Without his record the mean for the group is 58.7 — .3 of a point lower than the tenth-grade norm.

These results are significant and encouraging. Not infrequently we are asked how the accomplishment of the opportunity room compares with the attainment in average classes. The above figures give a very decisive answer to this question.

While it is interesting to find that the scores attained by the group in the opportunity room are in nearly every case greatly in excess of the norms for unselected children of the same grade, it is of far greater importance to know that the individual pupil is earning scores commensurate with his mental age. The question which every teacher of an opportunity room for gifted children should ask herself is, "Are the children doing all they are capable of doing?" If not, the opportunity room has failed to attain one end for which it was established. It is important, then, to know the child's achievement quotient. We have endeavored to answer this question through the administration of the Stanford Achieve-

ment Tests, recently devised by Kelley, Ruch, and Terman, a "battery of tests which cover practically all of the curriculum from Grades 2 to 8." By these tests achievement of gifted children in the seventh and eighth grades can be measured more fairly than by any other educational test. In the words of the authors, "Pupils in the 7th and 8th grades, who show superior ability, should be permitted by the method of scoring to earn subject ages higher than their real ages with the same frequency as do the younger pupils. The age equivalents have therefore been extended upward to include year 18 upon the basis of the normal distribution of such subject and educational ages. This makes it possible for 13- and 14-year-old pupils to score above their actual ages as often as they score below them. The validity of the extensions has been checked by means of actual distribution of the scores of unselected 14-year-old pupils."

The results of these tests seem to indicate that the children of the opportunity room are achieving in accordance with their ability in subjects included in the regular school curriculum, despite the fact that the usual time allotment for these subjects is so greatly reduced that children participate in certain activities only three times a week and in others only twice. It must not be forgotten that extra-curricular activities are introduced for all and that several members of the opportunity room take private lessons in special subjects after school hours.

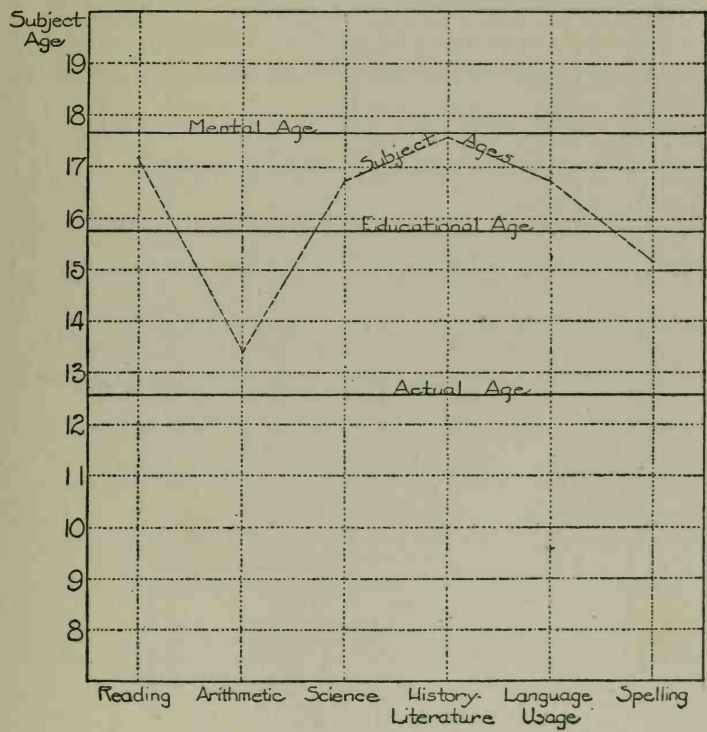
The tests were given and scored by the writer. An assistant was present during their administration, acting as timekeeper. Directions were followed verbatim. The statistical work was checked by Mrs. Keller.

The method employed in finding subject age and educational age is that indicated in the Manual of Directions prepared by the authors of the test. The Stanford-Binet mental age was used in making the comparison between mental age

and educational age. "This comparison is especially significant when a Stanford-Binet mental age is available," for the "Stanford Binet mental age is relatively independent of schooling, and therefore gives a more reliable indication of what a pupil's attainment in school subjects ought to be." In graphing each child's educational profile the writer has followed the method suggested in the Manual of Directions of the Stanford Achievement Test.

EDUCATIONAL PROFILES AND ACHIEVEMENT QUOTIENTS

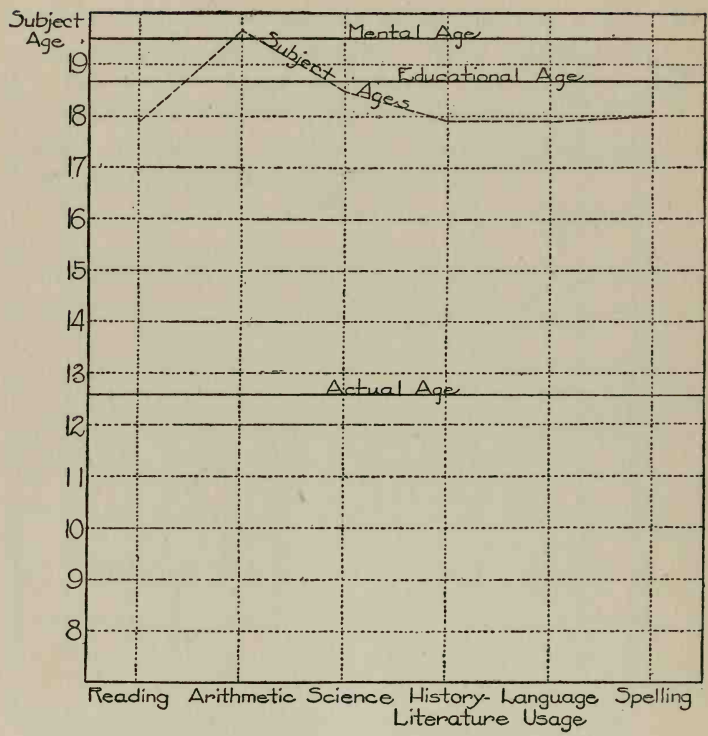
CASE 1, R. W.



Age 12–7; M. A. 17–8; IQ 140
Ed. A. 15–9; Ed. Q 125; AQ 89
Years in school 3–6

Case 1 shows a discrepancy of 1 year, 11 months between mental and educational ages. This is explained by the fact that Case 1 has never attended school for any but half-day sessions. She has taken four violin lessons weekly for the last three years and practices from three to four hours daily.

CASE 2, R. P.

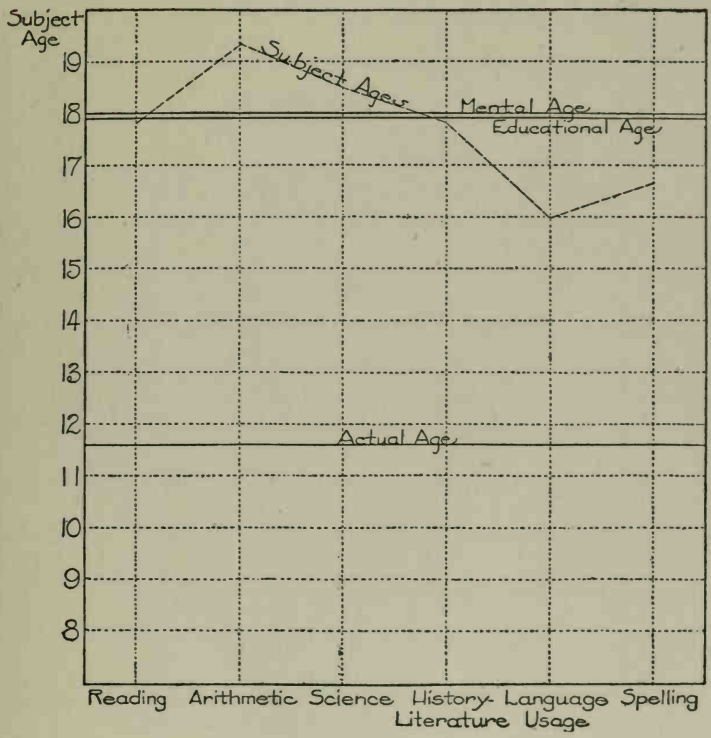


Age 12–7; M. A. 19–6; IQ 155
Ed. A. 18–8; Ed. Q 148; AQ 95
Years in school 8–1 [1]

It will be remembered that Case 2 was a social misfit in the regular class. He is now spending more time on sports and less in intellectual pursuits, but is achieving results closely commensurate with his ability.

[1] This includes 1½ years in the kindergarten.

CASE 3, L. A.

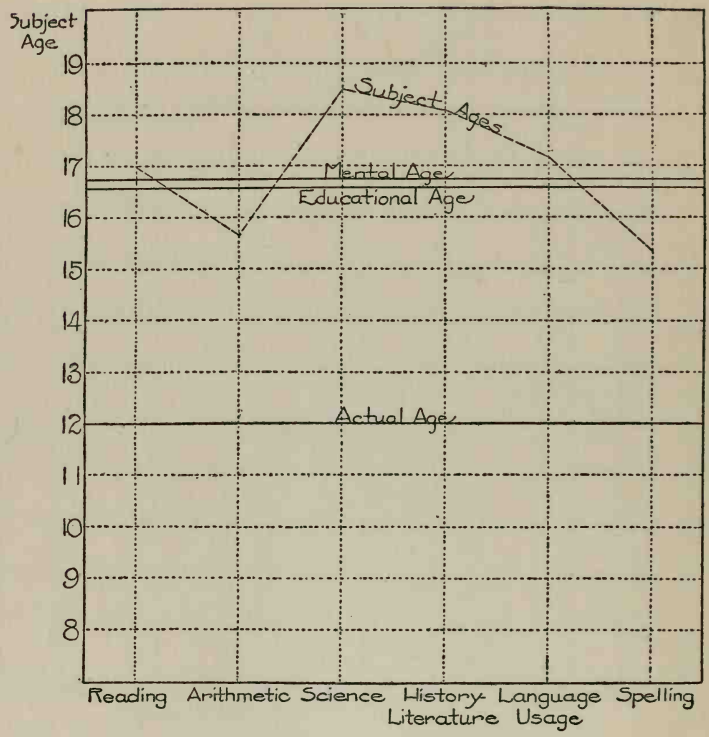


Age 11–7; M. A. 18; IQ 155
Ed. A. 17–11; Ed. Q 154; AQ 99
Years in school 5–7 [1]

Case 3, because of delicate physique, was compelled during his first years of school to attend for only half-day sessions.

[1] This includes 1 year in the kindergarten.

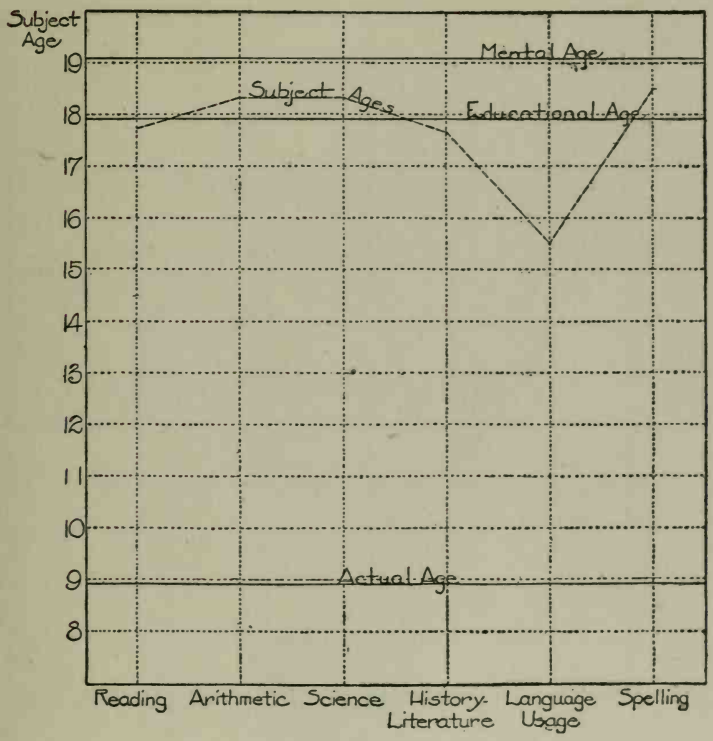
CASE 4, K. D.



Age 12; M. A. 16–9; IQ 140
Ed. A. 16–7; Ed. Q 138; AQ 99
Years in school 6–8

Case 4 is a veritable little dynamo of energy and dominated by a desire to excel.

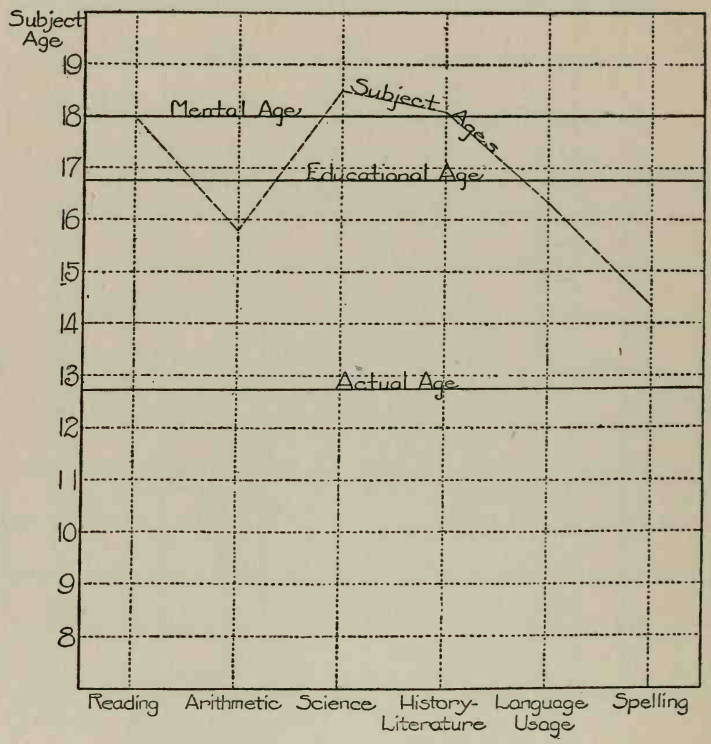
CASE 5, E. B.



Age 8–11; M. A. 19–1; IQ 214
Ed. A. 17–11; Ed. Q 200; AQ 94
Years in school 4–6

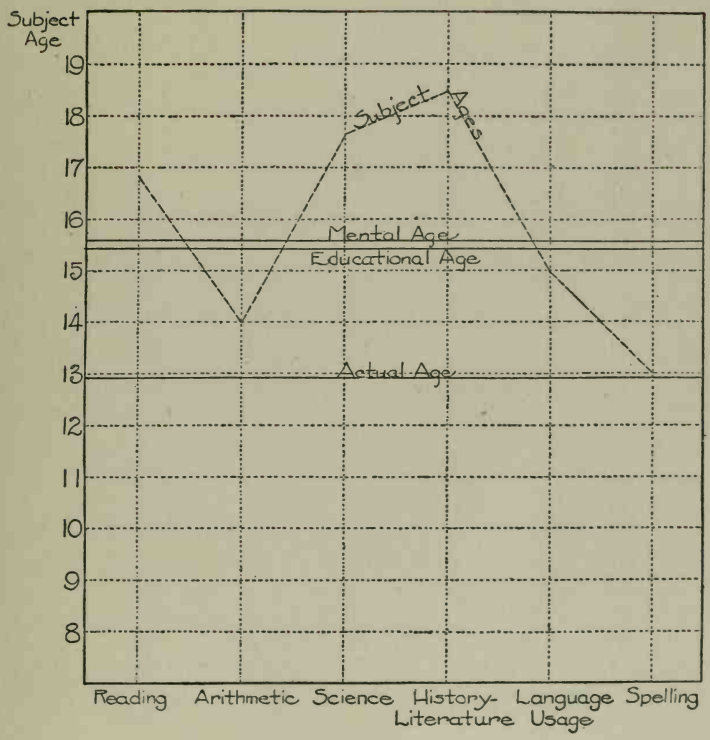
A child of 8–11, achieving 94 per cent of what her ability warrants.

CASE 6, P. T.



Age 12–9; M. A. 18; IQ 141
Ed. A. 16–9; Ed. Q 131; AQ 93
Years in school 5–9

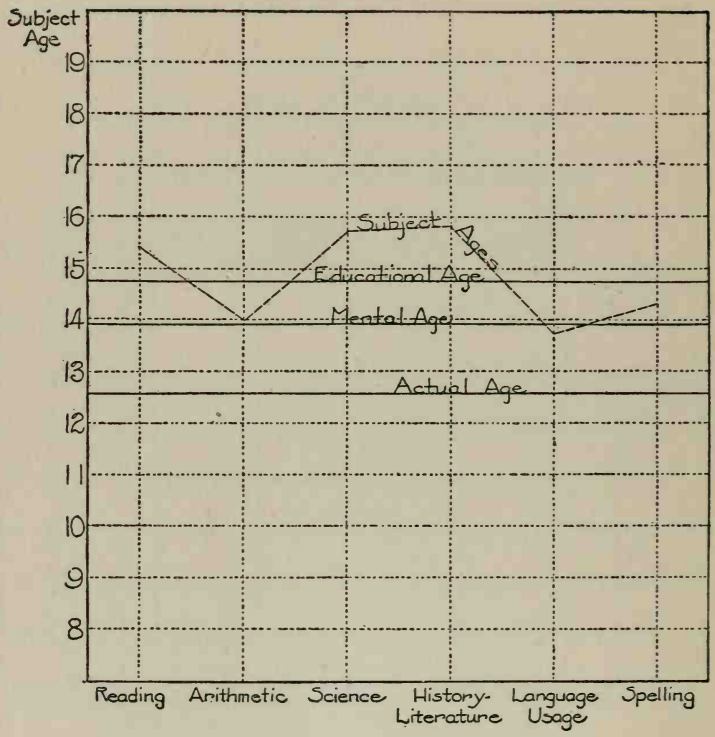
CASE 7, G. G.



Age 12–11; M. A. 15–6; IQ 120
Ed. A. 15–4; Ed. Q 119; AQ 99
Years in school 4–5

Exceptional industry characterizes G. G.'s performance.

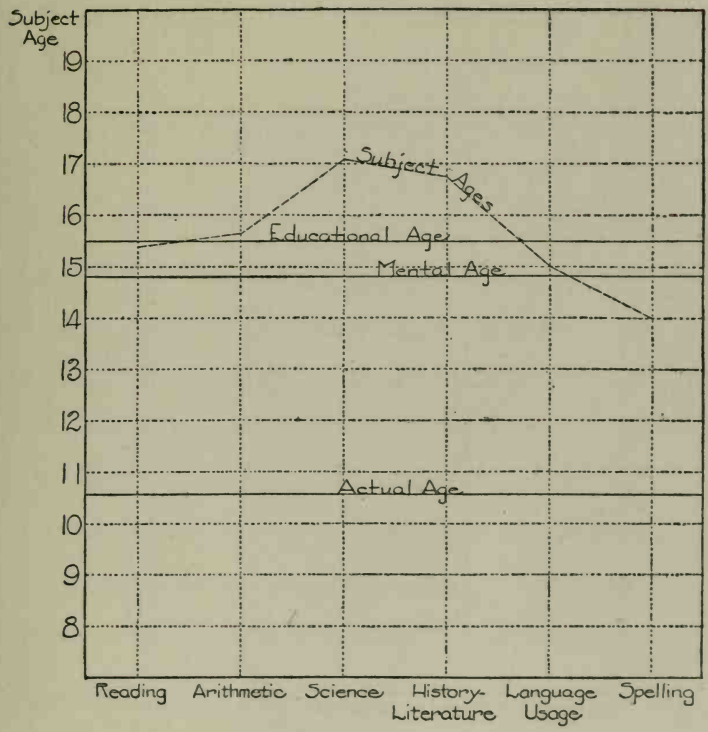
CASE 8, Z. B.



Age 12–7; M. A. 13–11; IQ 110
Ed. A. 14–9; Ed. Q 117; AQ 106
Years in school 3–7

The writer believes that this superior accomplishment is due to two factors, inordinate ambition and the stimulation of the environment.

CASE 9, C. P.

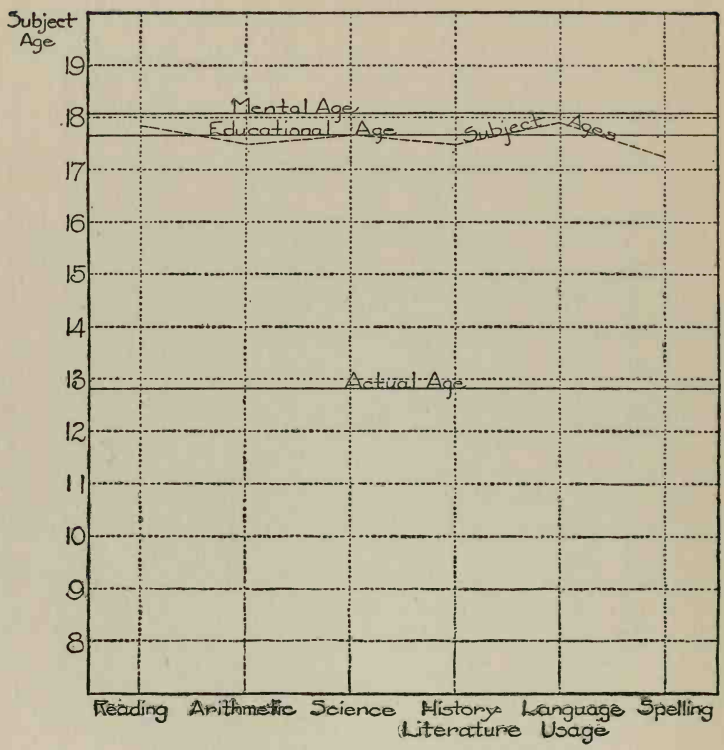


Age 10–7; M. A. 14–10; IQ 140
Ed. A. 15–6; Ed. Q 146; AQ 104
Years in school 6–1[1]

The writer had always felt that Case 9 did not live up to his ability. The test results fail to confirm this impression.

[1] This includes 1½ years in the kindergarten.

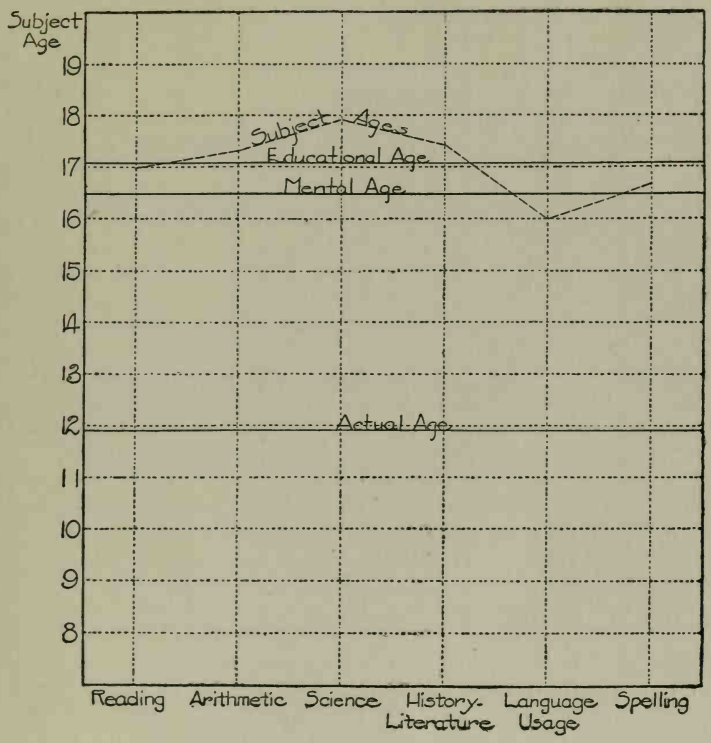
CASE 10, L. G.



Age 12–10; M. A. 18–1; IQ 140
Ed. A. 17–8; Ed. Q 137; AQ 98
Years in school 4–6

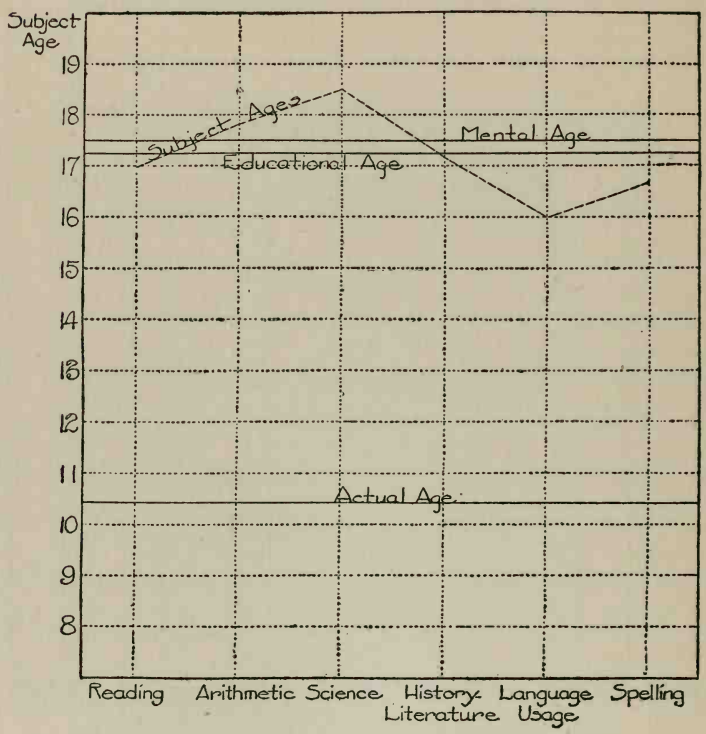
Exceptional industry as well as superior ability.

CASE 11, R. D.



Age 11–11; M. A. 16–6; IQ 138
Ed. A. 17–1; Ed. Q 143; AQ 103
Years in school 5–11

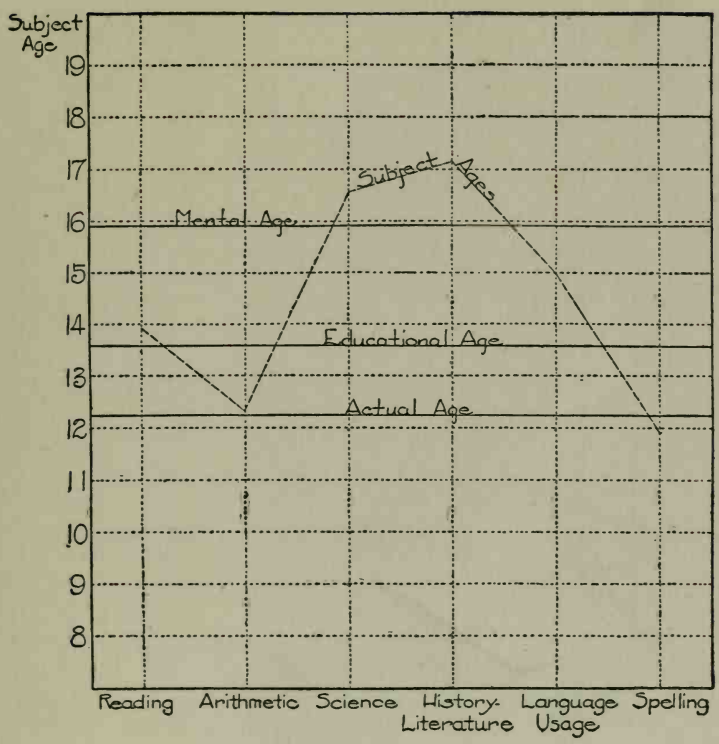
CASE 12, H. R.



Age 10–5; M. A. 17–6; IQ 168
Ed. A. 17–3; Ed. Q 165; AQ 98
Year in school $\frac{1}{2}$

A boy of 10–5 who is living up to his mental ability.

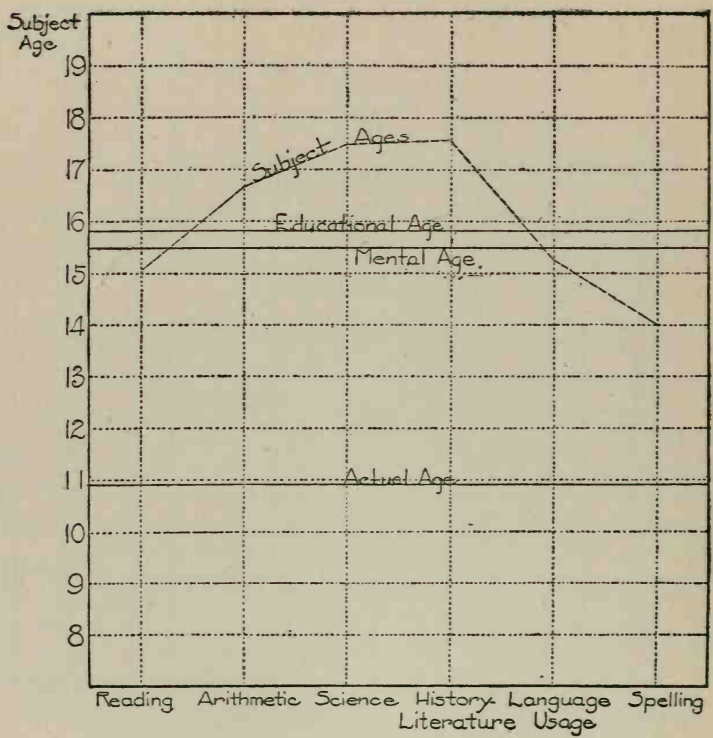
CASE 13, J. L.



Age 12–3; M. A. 15–11; IQ 129
Ed. A. 13–7; Ed. Q 110; AQ 85
Years in school 1–6

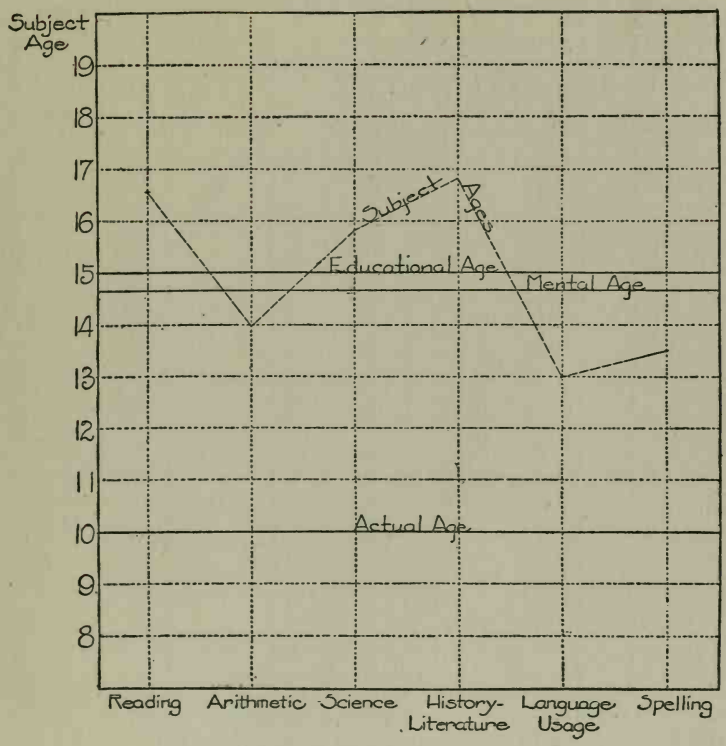
Case 13 was a member of the opportunity room for only 4 months. He had almost no systematic training before entrance to our school.

CASE 14, J. B.



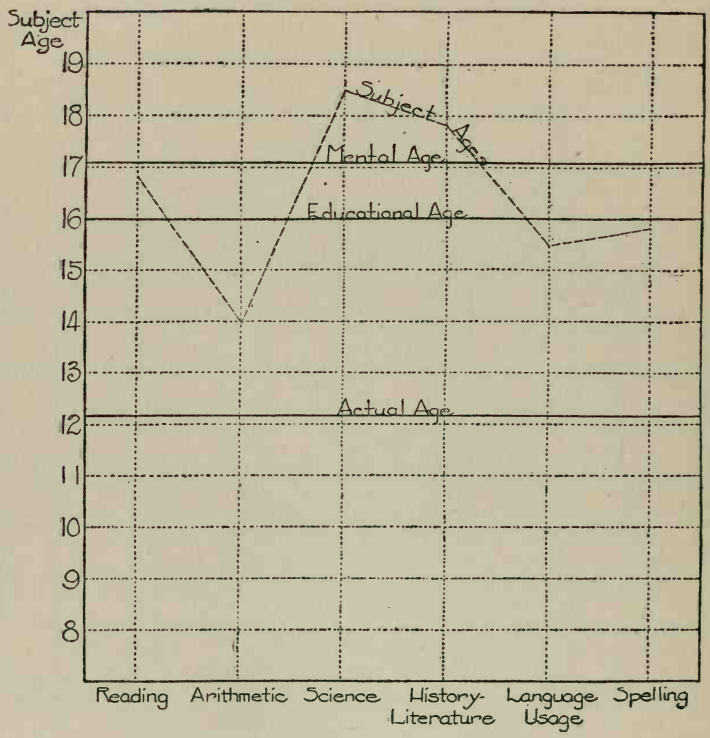
Age 10–11; M. A. 15–6; IQ 142
Ed. A. 15–10; Ed. Q 144; AQ 102
Years in school 5–6

CASE 15, M. C.



Age 10; M. A. 14-8; IQ 146
Ed. A. 15; Ed. Q 150; AQ 102
Years in school 4

CASE 16, J. W.



Age 12–2; M. A. 17–1; IQ 140
Ed. A. 16; Ed. Q 131; AQ 93
Years in school 1–6

TABLE III

Pupil	IQ	Reading Q	Arith. Q	Science Q	History and Literature Q	Lang. Q	Spell. Q	Ed. Q
Case 1	140	136	107	133	139	133	120	125
Case 2	155	142	156	147	142	142	143	148
Case 3	155	154	167	160	154	138	144	154
Case 4	140	142	130	154	150	143	128	138
Case 5	214	199	206	206	198	174	207	200
Case 6	141	141	124	145	142	128	112	131
Case 7	120	130	108	137	143	116	100	119
Case 8	110	122	111	125	126	109	114	117
Case 9	140	146	148	161	158	142	132	146
Case 10	140	139	136	138	136	140	134	137
Case 11	138	143	145	150	146	134	140	143
Case 12	168	163	171	178	165	154	160	165
Case 13	129	114	100	135	140	122	97	110
Case 14	142	138	153	160	161	140	128	144
Case 15	146	166	140	158	168	130	135	150
Case 16	140	138	115	152	146	127	130	131
Average	144	144	138	153	150	136	133	141

An examination of Table III shows that the subject quotients in reading, science, literature, and history either very closely approximate or exceed the IQ. In arithmetic, the mechanics of language, and spelling there is a tendency [1] for the subject quotient to fall slightly below the IQ.

The average IQ is 144, the average EQ 141. In other words, these children are accomplishing in the usual school subjects, notwithstanding the reduced time allowances and extra-curricular activities, approximately 98 per cent as much as the mental age would warrant us in expecting ($141 \div 144 = .979$). This is in noteworthy contrast with the findings for bright children in the regular grades, who in

[1] This tendency is discussed in detail in Chapter XV.

the large majority of cases are failing to live up to their educational possibilities. There is no doubt that if these pupils had had the advantages of the opportunity room from an earlier age, the ratio of average EQ to average IQ would have been 1.00 or higher, instead of .979.

CHAPTER TEN

Group Projects and Activities

To meet two needs of gifted children — education in accordance with individual differences and training in socialization — we have stressed problem-projects in which either the entire group or a smaller group work together for a given end. It has been our experience that these children are not especially interested in projects dealing with concrete things. They prefer the abstract. They delight especially in projects which lead to creative work — to the collection, organization, interpretation, and application of data.

A few projects which have functioned successfully are presented in the following pages.

A TERCENTENARY PROGRAM

In the fall of 1920 it was suggested that all the children in the Training School unite in giving a program in commemoration of the three hundredth anniversary of the landing of the Pilgrims. The children of the fourth, fifth, and sixth regular grades and the children of the opportunity room presented the history of the Pilgrims. Those of the fourth and sixth grades, respectively, depicted through pantomimic performance Pilgrim life in Holland and America. It fell to the members of the fifth grade and the members of the opportunity room to present the Pilgrims in England.

In preparation for this project the children reviewed the history of the Pilgrims in England, using, as a basis, Pumphrey's *Stories of the Pilgrims*. After suitable preliminary study they assembled to plan their part of the project. It was conceded that this period of Pilgrim history did not lend itself to pantomime but could be presented more effectively through the spoken play. As the children were

limited to twenty minutes on the stage, only the most important events could be developed. Two scenes, depicting one secret meeting and one attempted departure, were written. One member of the opportunity room wrote a prologue and introduction to each scene, composing these at school during the time allotted for written language. The child taking the part of John Robinson wrote the sermon and the prayer and chose the Bible verses which he read and those which the congregation repeated in unison. After the play was completed, it was placed on the board for final criticism.

Many interesting comments were made during the writing of the play as to the manner in which the Pilgrims, a staid and dignified people, would express themselves. Throughout the entire project the most noticeable thing was the freedom and spontaneity with which the children talked and the way every child substantiated his opinion with a good reason. We reproduce the play exactly as it was written.

The Pilgrims in England

Characters

William Brewster (assistant pastor and owner of Scrooby Inn)
Mrs. Brewster (his wife)
Jonathan } their children
Patience } their children
Fear } their children
John Robinson (pastor and one of the leaders of the Pilgrims)
Mrs. Robinson (his wife)
William Bradford (the third leader of the Pilgrims)
Dr. Fuller (one of the Pilgrims)
Mr. Chilton (another Pilgrim)
Mrs. Chilton (his wife)
Mary, their daughter
First Pilgrim
Second Pilgrim
King's Soldiers
Ship Captain
Sailors

Prologue

(Written by R. W. [Case 1] at age 10 years, 5 months)

King James established a church in England which he called King James Church of England. He wanted all the people of England to go there. There were some people, however, who would not go to that church, but who wished to worship in their own way. These people were called Pilgrims. Because they would not go to the king's church, they had to worship secretly. Their secret meetings were held at Scrooby Inn. Scrooby Inn was at one time a fine palace, but at this time it was used as an inn where travelers stopped overnight and changed horses.

The three most prominent men among the Pilgrims were: John Robinson who was the pastor, William Brewster who owned Scrooby Inn and who acted as pastor when the former was absent, and William Bradford. They met at Scrooby Inn each Sabbath morn, but King James heard that the Pilgrims were not going to his church so he sent soldiers to see what they were doing.

One Sabbath morning when one of the meetings was being held, and John Robinson was reading aloud, the people heard heavy footsteps on the stairs and presently the door opened and in walked two soldiers. One of them handed John Robinson a note from King James and then they walked away leaving all frightened and wondering what would happen to them.

Then John Robinson said, "I fear we will have to stop holding our secret meetings here any more. I suggest that we meet in different houses each Sunday."

"I," said William Brewster, "think that would be well because I do not think we shall be safe here any longer."

So they met at one house and then another until the king's soldiers became confused and gave up trying to find them. King James then sent other soldiers.

After some time the Pilgrims decided to meet at night because they thought the king's soldiers were watching them, and they knew also that it would be harder for the soldiers to find them at night.

After a space of time the new soldiers learned of their plans and followed them. Then the Pilgrims had to meet in stables, barns, sheds and many places other than houses.

One evening when a meeting was being held in the loft of a barn the people heard the soldiers coming up the ladder. The men hid

the women and children under the hay and turned around to face the soldiers. The soldiers arrested the men and took them to prison where they were kept for a few weeks and then they were released to go home to their wives and little ones.

After many short terms in prison the Pilgrims pronounced it unendurable, and a meeting was held among the leading Pilgrims to discuss the matter.

At last it was decided to leave England. But where should they go? They didn't know. Many of them suggested different places which they thought had religious freedom. But no guessing could be considered for they did not wish to sell the property they had and sail from England and find themselves property of some other king's soldiers.

Elder Brewster, at last named Holland and said, "In my youth I once lived in Holland. It was a very delightful country and everyone had a perfect right to worship as he pleased. There is plenty of help needed in the mills so the men can find work there."

It was at last decided that they go to Holland and everybody sold their belongings and when all were out of prison they set a night for starting. On a forlorn place on the beach just outside of the city, a little company gathered and anxiously waited for the ship which was engaged to take them to Holland.

They waited all night and just as the morning began to dawn some white sails appeared, and slowly the long looked for ship came in as far as possible and anchored. The captain sent some little boats ashore and when all the people and provisions had been taken on board the larger boat William Brewster said, "Now let us make haste and start for the daylight is here and the king's soldiers might be looking for us."

"Not so soon," said a great number of exceedingly gruff voices that seemed to echo for miles.

It was the soldiers. "How is this?" said Elder Brewster. "You have betrayed us!" He spoke thus to the captain, but there was no captain to be found. He was too ashamed so he went to hide.

Again the Pilgrims found themselves inside the dark walls of prison. They had sold all their belongings and very sad indeed were they when they were released from prison. It was bad enough to be in prison, but it at least kept them living. Now they were homeless and had nothing to eat. Fortunately they had some friends who were glad to have them stay with them for a short time.

Another plan was made to start for Holland. When fall came

they took a small boat and pushed it down the stream which went to the sea. In the boat were women, children, provisions and older men. It was still a more lonely place this time and the captain was a Hollander who had a small ship and made a living by fishing and carrying people to and from Holland. The little vessel appeared and came in as far as it could and the Hollander sent a very small boat to the shore and after many loads of men and provisions the only ones left on shore were the women and children. Suddenly the Hollander lifted his spy-glass and saw a long line of the king's soldiers marching down the hill that lead to the beach.

The men said, "Quick, let us get the women and children on board." But the sailors had already lifted up the anchor, the sails spread and the ship sailed away.

When the soldiers reached the spot they found only some very helpless children and women to take to prison.

King James of England grew so tired of having to bother with the Pilgrims that he said, "When their husbands and fathers get enough money to hire a ship, let them go to Holland."

Several months later a very happy company was again united in Holland.

Introduction to Act I Scene I

The first scene to be given will be "A Secret Meeting of the Pilgrims," held in the loft of a barn in Scrooby England.

Act I

Scene I A loft in a barn.

(Enter Mr. Brewster and his son Jonathan. They get the loft ready for a secret meeting.)

Jonathan: Father I wonder if mother, Patience and Fear are coming soon. I hope the king's soldiers haven't found them.

Elder Brewster: I think the soldiers have not found them my son, but do not fear the Lord will take care of them.

(A noise is heard on steps leading to loft.)

Jonathan: Father, did you hear that noise?

Elder Brewster: What noise?

Jonathan: That noise coming up the steps.

(Elder Brewster goes to the door.)

Jonathan (very excited): Father, it's the soldiers, it's the soldiers —

(Enter Mrs. Brewster, Patience and Fear.)

Elder Brewster: Did you see any soldiers?

Mrs. Brewster: No, I didn't see any soldiers but Fear was imagining them in every shadow.

(Enter Dr. Fuller, Mr. Chilton and Mary Chilton. They look around to see who is there.)

Dr. Fuller: Good evening Elder Brewster. Are we early?

Elder Brewster: No you are not very early. The meeting will start as soon as most of the people get here.

Fear (running to Mary): Hello Mary. Come and play.

Mrs. Brewster: No dear, you must not play because the soldiers may be near and hear you.

(Enter William Bradford.)

William Bradford: I saw two soldiers guarding Scrooby Inn. They seemed to think we would meet there so I do not think they will come here.

Mr. and Mrs. Robinson enter and greet those gathered.

Mr. Robinson: Now my good people as most of us are here we will begin our meeting.

(Pilgrims assemble for meeting.)

Mr. Robinson: I will quote from the one hundred seventh Psalm.

"Oh give thanks unto the Lord, for he is good; for his mercy endureth forever.
Let the redeemed of the Lord say so, whom he hath redeemed from the hand of the enemy;
And gathered them out of the lands, from the east, and from the west, and from the north, and from the south.
They wandered the wilderness in a solitary way; they found no city to dwell in.
Hungry and thirsty their soul fainted in them.
Then they cried unto the Lord in their trouble, and he delivered them from their distresses."

(Sermon)

My good brethren, we have come together for a few moments of worship. We need the guidance of our Father. He has promised to deliver us from the enemy so let us believe this promise.

Shall we bow our heads in prayer just now?

"Our Father we come to thee in humble supplication, for we know that thou canst deliver us from the hand of the enemy. We thank Thee for past blessings, and beseech Thee to save us all for Thy name's sake. Amen."

Let us repeat together some of the verses of the Bible that we all know.

(Pilgrims repeat in unison.)

"O come, let us sing unto the Lord: let us make a joyful noise to the Rock of our Salvation.

Let us come before his presence with thanksgiving and make a joyful noise unto him with psalms.

For the Lord is a great God, and a great —

(Enter two late pilgrims who have been running. Pilgrims stand up to hear their message.)

First Pilgrim: (panting) I saw some men — coming down — the street. They — were coming — this way.

Second Pilgrim: I think they are soldiers.

(Women and children are hidden. Soldiers enter and surround men.)

Soldiers: We have found you at last. Come with us.

(Soldiers take men to prison. Women come from their hiding places, look very distressed and go silently homeward.)

NOTE — Extra Pilgrims come to the meeting at different intervals during the first part of this act.

Introduction to Act II

The next scene will depict "The Second Attempt of the Pilgrims to leave England."

Act II

Scene I — A lonely spot on the seashore.

(Pilgrims waiting for the ship in which they are to attempt a second departure.)

Patience: (sadly) Father do you think the soldiers will get us this time?

Elder Brewster: The captain is an honest man and I do not think he will betray us as the other one did.

Pilgrim: Look here comes the ship at last.

(Pilgrims look in that direction.)

William Bradford: Come, let us get our baggage ready for the boat will soon be here.

(Pilgrims begin getting their things together.)

Mrs. Robinson: Now that everything is ready let us see if everyone is here.

(Pilgrims look around to see if all are present.)

Mr. Chilton and Mary are talking to each other.
Mr. Chilton looks toward the sea.

Mr. Chilton: At last the boat is here.

(Men take baggage to small boat. Men talking in back of stage — on board the boat.)

First Pilgrim: Look, what is that black line coming down the hill?

Second Pilgrim: It's the soldiers.

Third Pilgrim: Let us return to our families.

Captain: Weigh the anchor, my men. Let us sail at once. I do not want to lose my ship for it is the only thing I own.

Sailors: Aye, aye, sir.

(Soldiers come on stage and surround women.)

Mrs. Robinson: Oh, do not take us!

Soldier: We do not want to take you but it is the king's orders.

(Soldiers lead women off stage.)

A CHRISTMAS PLAY

In the geography class the idea developed of writing and presenting a Christmas play which would introduce our guests at the Christmas celebration to the children of other lands. The writing of the play was accomplished during the periods set apart for written language. The children were told about a similar play found in *Little Folks' Christmas Stories and Plays,* by Ada M. Skinner. Several parts and

songs from the play were read to them so they might understand the type of material used and the style employed.

The group had been studying Europe; so they decided to include in the Christmas party only children from European countries who would tell of the Christmas customs of their lands. Each child worked independently in preparing his part. The class worked together to write the verses for the songs, the music, and the connecting links.

As a preparation for the verse writing a number of songs and poems were read to the children in order that they might catch the spirit and acquire a poetic vocabulary. At the request of the class suggestive words were listed on the board, such as *yule-log*, *holly*, *bell*, *mistletoe*, *angel*, *manger*, and *star*. After a class discussion of what thought the opening song should express, each child wrote individually. Of these productions several of the best were placed on the board and worked over by the class. The student teacher scanned the lines, marking the accented syllables. The children's ears soon became sensitive to the meter of poetry and by reading the verses rhythmically detected an excess or deficiency of beats. They then smoothed the lines by adding or subtracting words as required. The children displayed surprisingly extended vocabularies and were very critical in their choice of words. As a result of this work the best verse was chosen for the play.

The student teacher of music directed the children in the writing of melodies for the verses. In two cases the music was written entirely by one child. All the members of the class contributed to the writing of the others.

The children concerned in this project, with the exception of one girl, who was ten, were either eight or nine years of age.

Christmas in Many Lands
or
A Christmas Wish Fulfilled

Characters

Viola	American children	Foreign children:	
Leslie		Spanish child	Russian child
George		French child	Dutch child
		Norwegian child	Swedish child
Christmas fairy		Irish child	Italian child

Act I Scene I Living room on Christmas Eve.

(Opening song sung by two children as they decorate their tree on Christmas eve.)

Joyous Christmas is almost here,
With it comes old Santa dear.
His bag is full of plums and toys
For good and kind little girls and boys.

I hope a blue-eyed dolly dear
Will come and live with me
I want a mechanical boat that will float
Left on the tree for me.

Our hearts are glad and gay
On Christmas morn, on Christmas morn,
Remembering the glorious day
When the holy child was born.

Viola: I wish Santa could come now, so I could see him.

Leslie: I do too. He is always so slow.

Viola: I suppose it isn't his fault, because he has to visit so many children and travel so far.

Leslie: Oh! Does he visit all the children in the world?

Viola: Why, I suppose so. (thoughtfully)

Leslie: Do all children have Christmas trees like ours?

Viola: Wouldn't it be too bad if they didn't?

Leslie: It certainly would, but then I'm sure most children do.

Viola: Don't you wish that the little children of other lands could come and tell us about their Christmas?

Leslie: How would they come? In an airplane?

Viola: Gracious! I wasn't thinking of how they would come, but most children would be afraid to ride in an airplane.

Leslie: I know I wouldn't be afraid, but then girls are "scardy cats."

Viola: Let's shut our eyes tight and wish real hard that we might have a Christmas party of all the little children in other lands.

Leslie: I think wishing is silly, but I'll do it to please you.

Viola: Now when I say "ready" shut your eyes and wish hard.

Leslie: Allright.

Viola: Ready! (Cue for fairy to enter, dancing and singing.)

Twinkle, twinkle little bells
I am the Christmas fairy.
I've flown from the grassy fairy dells
To make you children merry.
Fairyland your wish has heard
And grants that it may be conferred.

Both children: Have you really come to grant our wish?

Fairy: I grant one wish of each good child on Christmas Eve.

Leslie: Will children come from across the sea to tell us about their Christmas?

Fairy: Yes, because you have wished for it.

(Fairy waves wand and dances out of door. The children run after her, calling good-bye. Children sing third verse of opening song again, and arrange chairs, etc.)

Leslie: I wonder if we have been dreaming?

Viola: Hark!

(Spanish child enters shaking tamböurine.)

Spanish child: I come from Spain the land of romance and song. In our sunny land snow falls only on the mountain tops and flowers grow in the valley all the year round. When noche-buena comes, we have a merry time. In the morning all the people go to church, where priests dressed in embroidered silken robes lead the singing of Christmas hymns. When the people get home they feast, make merry and dance. In most windows there are images of the Virgin with candles burning near it. People send each other Christmas cards with greetings on them.

Viola: Don't you send presents?

Spanish child: Why, no, only cards. The streets are lined with gay shops full of fruit, candy and toys, and crowds of people, carrying tambourines and guitars wander about. Groups of children singing stroll up and down.

Viola: Your Christmas is far different from ours.

Spanish child: But we have a jolly time nevertheless.

(The sound of singing is heard in the distance; it gradually draws closer and an English child enters.)

English child: I am a little English girl named Mary. We were feasting and making merry as we always do on Christmas eve, when the Christmas fairy came. She took me with her and before I knew it I was in your home in America.

Near Christmas time, we go to the woods and gather evergreen, mistle-toe and holly. When we get home we help our Mother decorate the house. All day on Christmas we smell the delicious odor of all kinds of pastry, game and other things. One of our favorite dishes is plum pudding. Of course we burn the Yule-log on Christmas, pushing the end of it into the fireplace as it burns. We have a big Christmas tree like yours and we give each other presents. After the feast we all sit around the fireplace and tell stories.

Oh! I almost forgot to tell you. Early Christmas morning the minstrels go from house to house singing beautiful Christmas carols.

Leslie: Was that a carol you were singing as you came in?

English child: Yes.

Viola: Won't you sing it again?

(English child sings.)

The glorious heavens sparkled bright,
On a wondrous holy night
Long, long ago.
Then came shepherds from afar
Guided by a beaming star
Long, long ago.

Hail, oh hail, the angels sang
And all the heavenly bells out rang
Long, long ago.
Joy, oh joy on Christmas day
For in a manger the Baby lay,
Long, long ago.

Viola: Here comes a little maid of France. I know her by the tricolor.

Leslie: I always wanted to know how heroic France celebrated.

French child: My name is Lorraine and I have come to tell you about our Christmas. The poor children of Paris have their tree in the public square. By it stands Pere Noel. Pere Noel means Father Christmas. He gives out presents to the good children.

After the children have placed their shoes before the fireplace and have gone to bed, Pere Noel and his black slave Ruprecht come. Pere Noel puts presents in the shoes of the good child but the slave puts a whip in the shoe of the bad child.

The people also celebrate by building a tiny manger, with figures representing the Christ Child, Mary, shepherds and wisemen. They place this manger beneath their tree.

Viola: I am glad we don't have wooden shoes. Stockings hold more.

(Enter Norwegian boy, blowing on hands to get warm.)

Norwegian child: In Norway at Christmas we have jolly times around our tree and hunting for our gifts which are hidden in many places.

Leslie: It must be exciting to hunt gifts. That is like our Easter egg hunt.

Norwegian child: On the day before Christmas we children are busy tying oats and corn on poles, barns, trees, and housetops, for the birds. The Norwegian people begin their Christmas with divine services, before the repast is served. Fish, poultry, meat and all goodies known to the Norwegian mothers are eaten.

Viola: Don't you have ice cream, and cake, and candy canes?

Norwegian child: In our country we like meat better.

Sometimes at seven o'clock in the evening boys in white carrying star-shaped lanterns and a doll to represent the Virgin and the Holy Babe go from place to place singing Christmas songs.

(Irish child enters singing song.)

On Christmas day in Ireland
We hang the wreathes of holly
We tell each other stories
And all is happy and jolly.

On Christmas day in Ireland
All is happy and gay.
We play on harps and fiddles
And dance the night away.

Irish child: What is that? (Pointing to Christmas tree.)

Viola: That is our Christmas tree.

Irish child: Oh, isn't that pretty. I have never seen one before.

Leslie: What do you expect Santa Claus to bring you this year?

Irish child: Who is he?

Leslie: Why, Santa is the friend of children and brings us gifts on Christmas. What do you do on Christmas? Won't you sit down and tell us?

Irish child: Tonight at home we sit down and pray. After we come home from church we place a cross and two lighted candles in the window and they burn all night in memory of the Christ Child.

In the morning the men bring in a log and burn it in the fireplace. We decorate the house with mistletoe and holly.

In the afternoon we take presents to the poor and sick children. At night we feast, tell stories and dance.

Leslie: What is that stick for?

Irish child: It is called a Shelalee, and is used in a game we often play.

Viola: Just think of a Christmas without gifts.

Irish child: We have great fun anyway.

(Russian child runs in suddenly.)

Russian child: Greetings for the Lord's birth.

Leslie: Merry Christmas.

Russian child: You should have answered, "God be with you." Babouscha would like to warm her hands at that fire.

Viola: Babouscha, who is she?

Russian child: Babouscha brings us toys every Christmas eve. I suppose you would like to know how she started to do that.

One cold night long ago, three wise men knocked at her door and asked if she wanted to go with them and bear gifts to the Holy Child. She said, "No, it is too cold." So they went without her.

Later she wished she had gone, but she had forgotten to ask the way. She put some sweetmeats and toys in a bag and started out. She went from house to house and whenever there were children she left a gift, but she searched in vain for the Holy Child. So every Christmas eve, she starts her search again for Him.

Viola: I feel sorry for her, wandering over the snowy plains.

(The sound of clacking of wooden shoes is heard in the distance. Presently a Dutch child enters.)

Dutch child: In Holland children have their greatest feast on December fifth. We also celebrate December twenty-fifth.

You should see our shops! how brilliantly decorated they are. I think it great fun to go out with our fathers and mothers. We go into the crowded streets to see the beautiful Christmas things.

On Strooviavord which means "strewing evening" in your language, we fill our sabots with hay for St. Nicholas' horse Sleepner, and put them on the fireplace. We go to bed early, to get up at dawn.

The first place we visit is the fireplace, where we find our wooden shoes filled with sweetmeats and toys. We have the fun also of finding things hidden away, all over the house. Then give and take occurs. Peter hands over a beautiful doll he found in a sauce pan to Betty, who is very glad to give him in exchange a box of leaden soldiers that were cunningly hidden in mother's big work basket.

Beside presents and good wishes being given, cakes are placed at the shrine.

(Swedish child enters.)

Swedish child: I come from the frozen north — Sweden.

Viola: We are glad to have you at our party.

Swedish child: On Christmas eve in our land the children are sent out of the room while the tree is decorated. Then a hand throws a present to us, the door is opened and in we pop. We admire the tree, on the top of which shines a star of silver, look at our presents and play games.

Leslie: Does Santa bring you gifts?

Swedish child: Oh no, the gnomes do that. The man carries a bell and the woman a basket of toys. They stop at every house and leave presents for the people.

Sheaves of wheat are put in front of our house so that even the birds are not forgotten.

(Italian child enters.)

Viola: Here is another little friend.

Italian child: I am an Italian boy and have come to tell you about our Christmas. All the main streets are crowded with carriages and wagons. The shops are full of beautiful things too.

It is expected that by Christmas eve the people who have presèpios are ready to have guests pray before them and have strolling

musicians sing in front of them, for the presèpio is one of the principal things of an Italian Christmas. It is as expensive as people can afford. It shows the birthplace of the Christ, the Holy family Joseph and Mary. A doll to represent the infant Jesus, is brought in and passed around that every one may pray before it and then it is solemnly placed in the manger. Angels and other features are carved in wood and placed around. When the festivals are over the presèpio is taken apart and carefully stored for another year.

Our greatest fun comes when the "drawing urn" is passed. This is a big jar filled with packages. It is very exciting because some of the packages are blanks and have nothing in them and we all want to see who gets presents and who does not.

Oh, I almost forgot to tell you. We all go to church to see the procession of the pope and priests, who carry the Bambino, a figure representing the Christ child, for the worshippers to pray to.

Leslie: It must be exciting like a grab-bag, to get your presents from the "Urn of Fate."

Viola: Your Christmas is very religious but that is probably the custom of your country.

(Enter another American child.)

George: I heard music and talking so I came in to see what it was.

Viola: This is a neighbor boy.

Leslie: Will you tell our little foreign friends about our Christmas?

George: In America we always spend weeks before Christmas making and buying presents to give to our friends. We gather or buy mistle-toe or holly also to decorate our homes with. The night before Christmas we stay up late threading pop corn and cranberries to decorate our Christmas tree, which is a pine tree, set in a wooden stand and brought into the house. We then hang our biggest stocking by the fireplace and go to bed and dream what Santa is going to bring us.

We wake up early Christmas morning to see what Santa Claus has left us. We find some of our toys in our stockings and the rest of them under or on the tree. After we have played with our presents we take the gifts we have for others and visit our friends' houses, leaving them at their trees.

We sometimes go to church and then come home to our Christmas dinner. We have turkey, sweet potatoes, cranberry sauce, mince pie and lots of other goodies.

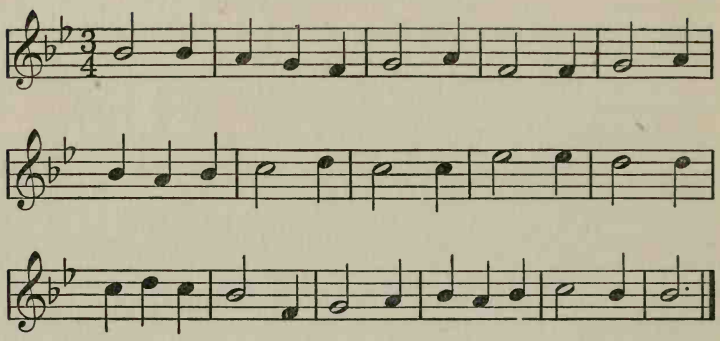
Viola: Isn't it odd that we all have a different way to celebrate Christmas?

Leslie: Yes, and we all like our own way best. Let us sing a song to close our party.

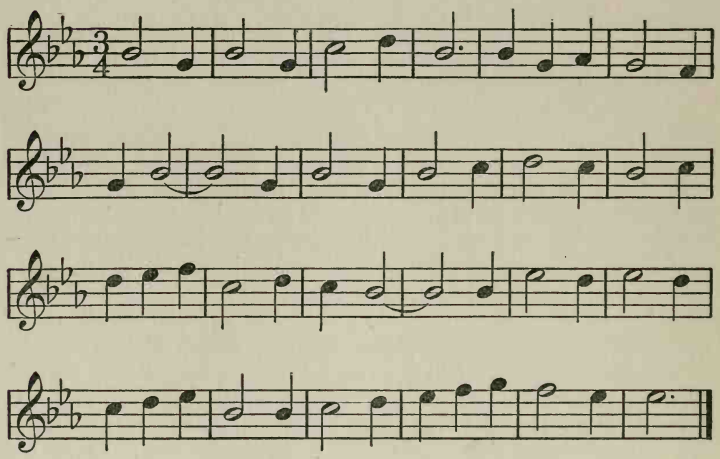
Closing Song

In sunny Spain of romance
We feast and all is gay.
In England there are Xmas trees
And toys with which to play.
In France Pere Noel brings round the toys
And Ruprecht leaves whips for naughty boys.
In snowy Norway toys are hidden
To hunt the gifts, each child is bidden.
In Ireland at Christmas time
The colleens dance and all is fine.
In frozen Russia far away
Babouscha hunts until this day
To find where did the Christ child lay.
In Holland land of many dikes
St. Nick brings toys on Xmas night.
On Swedish house-tops there is hay
For hungry birds on Xmas day.
In Italy land of climate fair
Cathedral bells sound in the air.
In America, land of the free
Old Santa decks our Xmas tree.

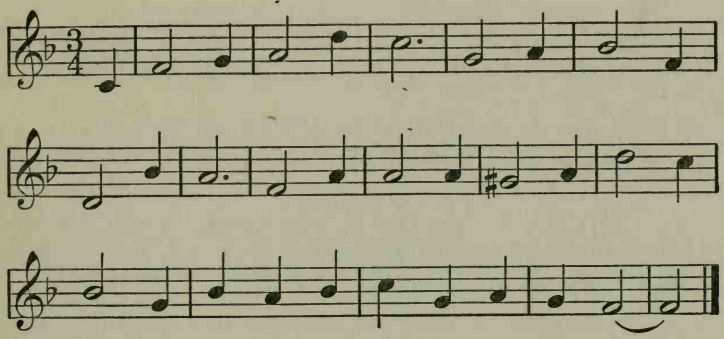
FIRST CHRISTMAS SONG



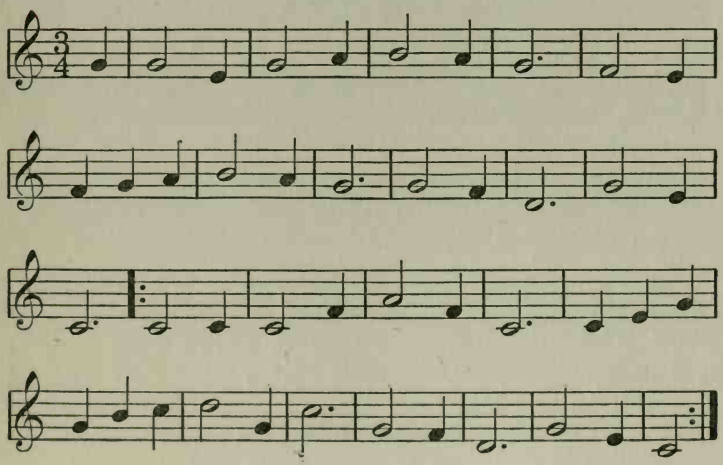
FAIRY SONG



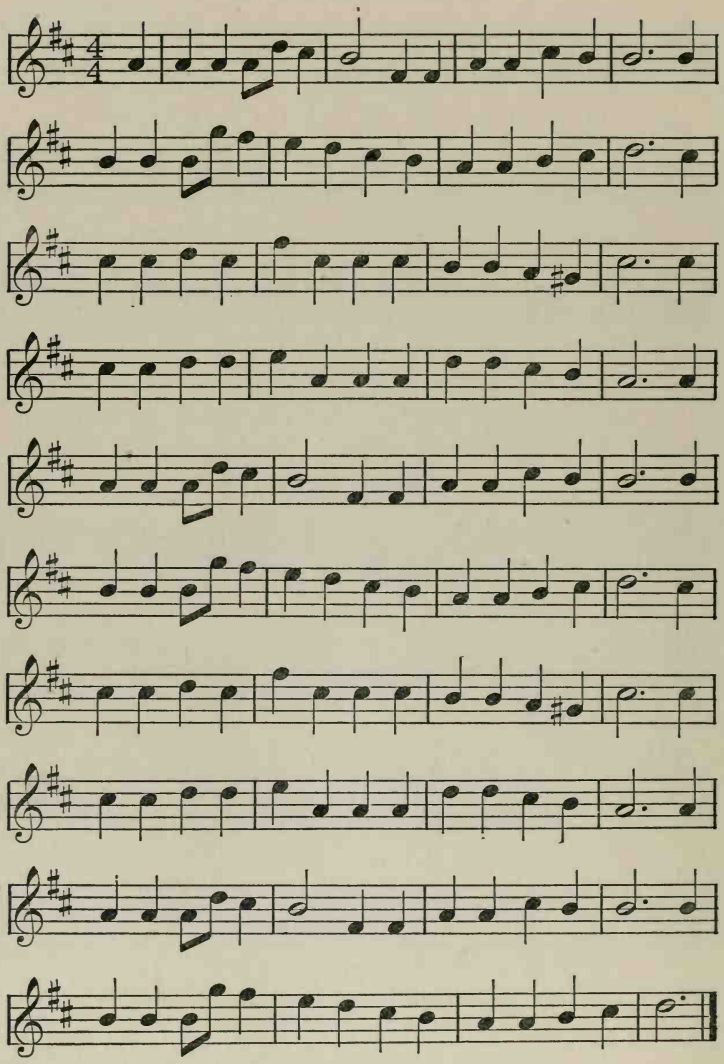
IRISH SONG



ENGLISH CAROL



FINAL SONG



CHAPTER ELEVEN

Group Projects and Activities (*Continued*)

A PROJECT INVOLVING GEOGRAPHICAL RESEARCH

At one time the entire group organized as the "Imperial Publishing Company." The purpose was to "publish" pictorial geographical literature; namely, books and charts dealing with the geography of Europe.

The work was done entirely by the children, who, under the guidance of the supervisor of manual arts, cut the paper, punched the holes, covered and lined the cardboard for the outside cover, and bound the finished books. The charts, which were sectional, were so fashioned that when not in use they could be folded up and packed away in a small space. Both books and charts showed pictures, clippings, manufacturers' samples, original drawings, and brief descriptions of the geographical features studied.

Most of the pictures were collected by the children. When they were furnished by the teachers, each child was expected to select independently from those contributed, giving a reason for his choice. Pictures were gathered from any source available: old magazines, the Sunday supplements, the *National Geographic Magazine*, foreign newspapers, foreign steamship and railroad advertisements, postal cards, seed catalogues, and labels on canned goods. Several of the children painted water-color illustrations. A Dutch child, a tulip garden, and the interior of a Dutch home, showing the bed in the wall, were some of the original illustrations worked out.

The study necessary for the writing, and the organization of subject matter through the arrangement of pictures, took the children to various textbooks, magazines, books of travel, and supplementary geographical literature of many kinds. It led also to the evolution of a general outline of

the features to be included if the books and charts were to present a true story of the geography of the countries studied. It is interesting to note that the outline emphasized human geography — the people, their manners and customs, dress, homes, occupations (especially those unique to a given country), commercial relations, and changes wrought by the World War.

The block printing on the covers, the linings of the covers beautifully stick-printed in striped or all-over designs, and the printing on the title page, were all worked out as problems in art. The block printing afforded unusual opportunity for original expression of knowledge gained through a study of national emblems and crests, such as the Scotch thistle, the British lion, and the fleur-de-lis of France. Each child originated a conventionalized design of the emblem studied, cutting the final design on linoleum blocks, from which they were printed on the covers by running them through a clothes wringer in lieu of a press.

This work demanded exceeding patience and care — a slip of the knife and the design was ruined. Skill also was required to transfer the design to the cover. Interest in the project was so intense, however, that the children voluntarily gave extra time after school hours and during the noon intermission to the accomplishment of satisfactory results. Many of the compositions were completed at home and were handed in long before the time when they were due. Our task was to find a way to limit the child, without extinguishing his ardor, to an amount of work in proportion to the value of the outcome. As far as possible, in the choice of topics for written composition children were left free. Some concentrated on one country or feature, others wrote on more general topics. Sometimes the subject chosen was that on which the child had collected the most pictures; again it was the topic of greatest interest to the young author.

At the close of the term the company held an exhibition of the books and charts published. This was conducted entirely by the children, one of whom officiated as chairman. Each member of the company represented a different country. He dressed in the national costume and talked on the country of his choice, using maps, charts, or books to illustrate his lecture. The audience consisted of A fifth grade pupils and of teachers, University students, and parents.

This problem motivated practically all the subject matter of geography for an entire term, and so stimulated the children to creative work that every member made a distinctive contribution.

A BALOPTICON LECTURE INVOLVING GEOGRAPHICAL RESEARCH

This lecture, a group project, was the culmination of the children's investigation in solving a geographical problem. The members of the class were to take the part of tourist conductors guiding a party, composed of students in an advanced geography course in the Normal School, on an imaginary tour of Switzerland. No material was furnished the children except a collection of postals and pictures, a few bits of carving, and a European guidebook. They went to the library, selected books, read intensively, and examined pictures and carvings. Then they assembled for a discussion in which the lecture was outlined and each child was assigned his particular topic. After this, individual work was resumed, each preparing his speech and choosing illustrations from any source available. The trip as outlined was one which a tourist might actually take. In presenting the program, the children assumed full responsibility, each one introducing the next speaker. This was the work of children whose ages corresponded to those found in the fourth, fifth, and sixth grades.

A BALOPTICON LECTURE INVOLVING HISTORICAL RESEARCH

This lecture was given during the World War. It was planned primarily to aid our boys in France. The admission fee charged (one book or two magazines) was suggested by the children, and a list compiled by them determined the acceptable magazines. The lecture was called "Missionaries of All Times." At the time there were several groups, each studying a different period of history, so that the lecture was merely an organized review of this regular work. Beginning with the first missionaries, their work was traced through history to the time of the Y. M. C. A. workers "over there." A splendid coöperative spirit prevailed, and each child not only assembled illustrative material from the library for his own use but brought to class also anything which might add to the effectiveness of another's speech. All were more concerned with the production of the class than with their individual efforts.

A HISTORICAL PROGRAM

Two groups, one studying Grecian history, the other Roman history, combined to give an entertainment at the close of the semester, to which their parents and friends were invited. The members of each group, with the exception of two eleven-year-old girls, were either nine or ten years of age. In all, nine children participated, preparing the following program with very little guidance:

Play: *Cicero and Catiline.* Members of the Roman History class. (Three girls and three boys.)

Debate: *Which was the more desirable city, Athens or Sparta?* A citizen of Sparta and two citizens of Athens. (Three members of the Grecian History class.)

Play: *The Beginning of the Persian War.*
(Three members of the Grecian History class.)

A Trip to Athens . . . . . Two Guides.
(A boy and a girl, members of the Grecian History class.)
(*a*) A visit to a Grecian house.
(*b*) A visit to the Parthenon.

The Parthenon and the typical Grecian home were modeled in clay and were complete in every detail, even to the Grecian motto above the door and the watchdog inside the house. The guides and the debaters wrote their speeches as part of the regular written composition work.

The play *Cicero and Catiline* was written by the members of the Roman History class working together, after studying several different references. Upon completing the writing the authors were permitted to go to another room and work out the oral presentation, directed solely by a member of the group. The costuming also was left entirely to the children. They studied Roman dress, discovering that it was a disgrace if a Roman's toga did not fall "over the left and under the right shoulder."

Cicero and Catiline

Scene I

Scene: Cicero on his way to the Senate.

A Roman, (running up to Cicero): Wait a moment. I have something to say to you.

Cicero: What is it?

Roman (excitedly): Last night I saw a large number of men. They were planning how to seize Rome. They have an army outside of the city. Catiline is at the head of the plot. I desire you to lay the matter before the Senate at once.

Scene II

Senate house: Senate is assembled and Cicero comes in.

Cicero: Oh, Roman Senate, I have discovered a startling thing. As I was coming to the Senate, I met a citizen who revealed to me a

plot against Rome, by the noble Catiline. He intends to seize Rome with the help of an army he has secreted outside of the city.

Senators, (surprised): Catiline has plotted against us?

Catiline: (jumps up) Oh Senate, this that Cicero speaks is not . . .

Senators (waving their hands wildly in the air): Down with him! Traitor! Enemy! Kill him!

(Catiline resumes seat.)

Cicero: In the name of the gods, Catiline, how long will you abuse our patience? Is there no limit to your audacity? I know your plots. You will do anything to gain wealth. You intend to murder the principle men and burn our city. Go forth! You shall no longer live in Rome, but go in exile.

Catiline (rises haughtily and passes out of the Senate): I shall go to Etruria and never again set foot in this cowardly city.

The End

In dramatizing *The Beginning of the Persian War*, the members of the Grecian History class composed the speeches as they planned the dramatization. After rehearsing it several times in this fashion, one of the members of the class wrote the play.

THE BEGINNING OF THE PERSIAN WAR

Scene I

A great empty senate hall

(Two men enter representing the Spartans and Athenians.)

Athenian: I fear the Persians will try to be avenged on us for helping the Greeks of Asia Minor.

Spartan: But we have armies. Sparta has been preparing for this for many years.

(Knock is heard. Athenian rises. Goes to platform.)

Athenian: My friends and coun . . .

(Messenger enters. Pushes speaker aside.)

Messenger: Hark, silence! I am a messenger from your future king.

(Bends low.)

Amazed Athenian: What king? We have our own government!

Messenger: That matters not! His Majesty King Darius is enraged at your helping the Greeks of Asia Minor. He will descend upon you, lay your land in waste, ruin your silly statuary, and make you his slaves unless you send him a bit of earth and a goblet of water, in token that you will obey him.

(Spartan, who has been making angry starts toward the Persian and who has been held back by the Athenian, now breaks loose and calls out.)

Spartan: Seize him, my men. Tarry no longer. Bind him fast.

(Spartan and men seize him, drag him toward a well, and throw him into it.)

Messenger: My Mighty King will be revenged for this. You shall be punished.

Spartan: There! Get earth and water from there.

(Spartan goes back to Senate where he sees the Athenian sitting in a dejected attitude.)

Athenian: You were not so wise as you may think. The Persian Army is very strong. They will come upon us and ruin our temples and other lovely things.

Spartan (disdainfully): Let them come!

(Long pause.) Spartan with an indignant look upon his face, paces to and fro. Sometimes he pauses and brings his fist down upon the table with vim.

(Suddenly another Spartan enters, walking casually.)

Second Spartan: Why so sad, my friends, upon this happy day?

Athenian: King Darius of Persia, who is enraged at our defense of the Greeks of Asia Minor, will make us his slaves and ruin our temples, homes, and statuary — that is, if we do not surrender. And here this hasty Spartan hath thrown the messenger into the well.

Spartan: We will not endure this! (Stamps his foot.) We will fight!

(All three stand in moody silence. Suddenly the Second Spartan's face lightens.)

Second Spartan: Hark ye, my brothers! The Persians cannot reach us except by the mountains or the sea. And that great

sea yonder (waves his hand as if indicating a large stretch of ocean), we have dominion over that sea. We have trading vessels for we are a great country in sea trading. The Persians have very few vessels and so cannot transport all of their soldiers. If they came by the mountains, we can guard the passes, and one man may keep back the whole Persian army. So take heart, my friends, and we will win. (Looks about room.) Where is the scroll that foul messenger brought? Ah, here it is. Let us tear it into bits. Go fetch the messenger from the well. We will send him back, to his Majesty, (with a low bow) King Darius of Persia. Let us clasp hands, my friends.

First Spartan: Do not refuse us, Athens.

(Three shake hands; Athens, reluctantly. Walk off together.)

The End

Sparta and Spartans

(Written by L. G. [Case 10] at age 11 years, 6 months, as her part in the debate between the members of the Grecian History class)

I contend that Sparta was the most desirable city of Greece.

The Spartans were very brave. They loved their native land and have been known to fight for their country until death.

Athens is another city in Greece and the two cities were as different in opinion as if they were a thousand miles apart. The Athenians loved new things and were so changeable that they were always seeking something new and did not get accustomed to anything. The Spartans loved old things and had many antique things. The people of Athens loved beautiful things, statuary, poems, and all kinds of art. One must know however that you can not live on art alone. Beside all this learning would have been destroyed had not the brave little city of Sparta saved it many a time so that it could better the world. The people of Sparta loved practical things. They thought all else rather foolish. They loved acts of bravery and excelled in war.

The Athenians did things for applause rather than for the good of their country. They had wonderful orators who could hold their audiences spellbound. So, often they decided great questions on the

spur of the moment, when they should have taken a long time to think them over. On the other hand, the Spartans were very deliberate.

The Spartans were so brave that they did not have to wall their cities. The sons of the people were the walls. When any one does a brave deed, we say, "He did that like a Spartan." They were the greatest soldiers and athletes in Greece and gave a wonderful example of courage and love of duty. The true Spartan would gladly sacrifice himself for his country, so great was his patriotism.

ARITHMETIC VITALIZED THROUGH A BANKING PROJECT

During one entire term the work in arithmetic of the fifth and sixth groups was based on banking. All working together incorporated a bank and drew up a charter, having previously investigated and learned the amount of capital stock required by law to establish a bank. Determining the amount of stock each child could afford to buy was a vital problem, for all were either officers or employees in the bank, with a stated yearly salary.

Bearing these salaries in mind, each child decided whether or not he could be the head of a family and own a house; and planned the sum to be deposited monthly in the savings and in the commercial account, as well as amounts possible to spend for food, clothing, amusements, higher life, and charity. The fourth-grade children participated in the activity to the extent of opening accounts, cashing checks, and buying money orders and drafts. A careful study was made of the income tax, after which each worked out his own, writing his check for the amount which he paid at the bank. In connection with this project a visit was made to a National Bank, where one of the employees conducted the children through the institution and explained through concrete illustrations the principles underlying banking. Incidentally the officials were exceedingly surprised at the intelligent and comprehensive questions asked by the children.

A BUSINESS ARITHMETIC

This project, which greatly interested a boy of eleven and a girl of twelve who were studying eighth-grade arithmetic, carried over an entire term. It was initiated through their desire to make something which would be useful in helping future classes understand business practices. The children made and bound a book. As finally developed, it included compositions explanatory of banking and of stocks and bonds, and newspaper illustrative material treating of current market conditions. No illustrative material was used except that which the children collected.

Under the guidance of the student teacher they did research work in preparation for their written articles. They studied these subjects in various textbooks, and afterward discussed the articles read, first outlining the points to be covered in each subject. Several interviews were held with a banker, who contributed much first-hand information.

In lieu of stock certificates, which of course could not be obtained for illustrative material, each child made an exact reproduction of one brought to the class by the student teacher.

When completed, the book contained seventeen articles on banking, as follows: The Importance and Purpose of Banks; The Value of Saving; Bank Accounts; The Check; Procedure in Depositing and Withdrawing Money; Borrowing Money from a Bank; Sending or Collecting Money; How a Forger was Caught; Corporations (two articles); Stocks (two articles); The Stock Certificate; Bonds (two articles); Liberty Bonds (two articles). The illustrative material was illuminating and included deposit slips (on three banks); withdrawal slips (on several banks); checks (on a number of banks), including indorsed checks; stubs; signature cards; pages from the bank book of a savings

account and from the bank book of a checking account; printed rules regarding service charge for accounts of less than $100.00; promissory notes; drafts; exchange slips; stock quotations (New York Stock Exchange); stock quotations (showing difference in price of same stock at different times); price quotations of Liberty Bonds; stock certificates (two); newspaper clippings regarding banking and stocks and bonds.

A few of the articles written by the children are reproduced.

Banking Accounts

(Written by P. T. [Case 6] at age 12 years, 1 month)

There are two principal kinds of accounts. These are Checking Accounts, and Saving Accounts. This is how a Saving Account is started. First, one must go to the Receiving Teller who gives you a deposit slip. This you must fill out with the amount of money you wish to deposit. The teller gives you a bank book. When you deposit more money it is added to your first money or principal. Every three or six months, three or four percent interest is added to the principal. The record of deposit and of interest is kept in your bankbook.

Saving and Checking Accounts are different in this way. In a Savings Account you can not draw out the money whenever you wish to, but in a Checking Account you can make a check. A Checking Account is started in the same way as a Savings Account, except that when you start a Checking Account you are given a check book. This is a book made up of many checks and stubs by which the checks are kept track of. People should be careful not to indorse checks and then lose them, because anyone can find it and cash it. Also people should be careful when writing out the amount, to fill the left over space with zigzag lines. Checking Accounts do not gather interest like Savings Accounts.

Business men and women keep their money in banks to lessen the risk of robbery. I think this is a very good scheme.

The Check

(Written by R. P. [Case 2] at age 11 years, 3 months)

I am a check. I am used for money, because I am a written order on a bank for a certain amount of money.

All kinds of banks receive money on deposit. There are several kinds of accounts, but the checking account and the savings account are the most important ones. A checking account yields no interest, but it is very convenient to have, for instead of carrying large sums around, with the danger of losing them or having them stolen, you deposit the money in the bank where it is safe to have. When you owe a debt, you can pay it through me.

The person who makes me out, writes the date and place first, then the name of the person or company the money is to be paid to. Next the money in figures and then in writing. Lastly, he signs his name on me.

A stub is made out to keep track of me. It is made out by writing the amount of myself in figures, the date, and the name of the payer, the money the maker has in the bank, the amount deposited, and the total of the money in the bank, then the balance is recorded.

After I have been made out, it is necessary to indorse me. This is done by writing the name of the payee on the other side of me. I cannot be cashed until this is done.

I can be made out to self. If this is done, no one can cash me except the one who makes me out.

Banks are always owing money to each other. For instance Harold Owen has an account in the First National Bank, and Harry Fitch has an account in the Security Trust and Savings Bank. Harold Owen makes me out for a debt he owes to Harry Fitch, and Harry Fitch cashes me at his bank, the Security Trust and Savings. Therefore the First National Bank owes the Security Trust and Savings Bank the amount of me. Instead of paying the money directly, the amounts the banks owe each other are balanced against one another at the clearing house.

I am very advantageous because I can be used as money, and instead of going to the bank, you can draw out money by means of me.

Borrowing Money from a Bank

(Written by R. P. [Case 2] at age 11 years, 4 months)

Some people borrow money to indulge in some luxury, but this is a dangerous thing to do. Sometimes it is absolutely necessary to borrow money. Banks are usually the lenders, and this is one of the ways they make money, charging more interest on loans than they give on deposits. The term "bank" comes from the Italian word "banca" meaning bench. The Italian who made a business of

borrowing and lending, sat on benches in the marketplace. When one of these men failed in his business, it was said that his "bench was broken," and thus the word "bankrupt" meaning "broken bench" came to mean a debtor who could not pay.

Sometimes a man borrows money to start himself in business. Then, after he has sold his goods, he can pay the money back.

In borrowing money from individuals, a promissory note is usually required. A promissory note is a written promise to pay an amount of money at a certain time. There are two kinds of promissory notes, the time note, due at a certain time after the money has been borrowed, and the demand note which is payable on demand. A promissory note bears interest. The face and principal of a promissory note both means the amount.

A promissory note is made out by writing the amount in figures, the place, date, the time due, and then the name of the payee. Next the money in writing, the interest, the date due, and lastly, the maker's name.

The payee is the man the money is owed to, the maker is the one who owes it.

Sometimes the payee wishes to sell the note. To do this he has to indorse it, that is, writing his name across the back of the note, signifying that he will be responsible for its payment, should the maker fail to pay.

The usual amount of interest allowed by law at banks is 7%, but some states allow more and some less. Individuals charge what they please, which is sometimes very high.

Stocks

(Written by R. P. [Case 2] at age 11 years, 8 months)

A share of stock represents a right to a certain amount of the profits which the company issuing the shares of stock earns. A stockholder is entitled to as many votes as he has shares of stock in the corporation. A stockholder receives dividends, that is, interest, on the shares of stock which he has. Sometimes a company will have such small profits that no dividends are paid at all. When this occurs, the stock of the company failing thus, is spoken of as being below par, and the money invested in the stocks is wasted. When a company gains moderate profits, and pays moderate dividends, the stock is spoken of as being at par. When a company makes enormous profits, and distributes large dividends among its stockholders,

this stock is above par. The par value of a share of stock is usually $100.00. When the stock of a certain company is below par, the stock is sold below $100.00 ranging sometimes as low as 35%.

When the stock is at par, the price stays close around $100.00. When it is above par enormous prices are sometimes paid, some stocks costing $400 apiece.

Some companies have two kinds of stock, common, and preferred. They are the same, except that preferred stocks bear a fixed rate of interest and will get that interest no matter what happens. The remaining profits are divided among the common stockholders. Therefore if a company had low profits, the preferred stock would get all, and the common stock holders would get very little, if any at all. Also if the company made enormous profits, the common stockholders would get more than the preferred stock-holders. Preferred stock costs more than common stock. A man called the "broker" secures the stocks for the buyers, and sells them for the sellers. He requires a sort of commission called brokerage, usually $\$\frac{1}{8}$ or $12\frac{1}{2}$¢ on $100 for his part in the transaction.

The Stock Certificate

(Written by R. P. [Case 2] at age 11 years, 8 months)

On the preceding page is my stock certificate. It represents four shares of the common stock of the Hammond Lumber Company. The certificate is worth $400, and would be worth much more if the common stock went above par.

I am paid twice a year my dividends, on January 1st, and July 1st. I have had this certificate for two years. This represents the total of the dividends which I have received.

January 1st	$20–5%
July 1st	$24–6%
January 1st	$8–2%
July 1st	$44–11%

Bonds

(Written by P. T. at age 12 years, 9 months)

A bond is a written promise to pay a certain sum of money at a certain time. It is issued by corporations when they wish to borrow a large amount of money. They are made secure by mortgages which are agreements to let the holder of the bond sell property of those who issue them, if they (the issuers) don't pay the interest when it is due.

Bonds differ from stock in this way; the stockholders own part of the corporation, while the bondholders are owed money by the corporation and are the creditors. There is also a difference in the income of stocks and bonds. The owners of bonds must be paid the interest of their bonds or the corporation's property will be forfeited. The stock owners are not so important.

Bond dividends are computed on the par value, exactly like stock.

EARNING MONEY TO BEAUTIFY THE SCHOOL

This project was carried out in coöperation with the members of the fifth grade, extending over a period of several weeks. It was initiated through the desire of both groups to beautify their rooms, and was conducted with the understanding that all money contributed to the purpose must actually be earned by the children. Each group gave a candy sale, the children making the candy at home and donating it. Each member of the opportunity room found some work to do outside of school in order to increase the fund. One girl ripped up a sweater, another (a child whose family could easily have given her the money) picked up stones for a gardener at ten cents a bucket. Others earned their money in various ways. R. W., the musical prodigy described in Chapter III, gave a program for the benefit of the fund. The children of both classes were responsible for selling the tickets.

As a result of the combined efforts of both groups $190.00 was earned. At the suggestion of the children, half this sum was contributed toward paying for curtains for the stage of our gymnasium, which serves also as an assembly hall. With the remainder it was possible to secure seven very beautiful pictures.

Perhaps the greatest value of this project was the socialized consciousness aroused through the effort which every child made in assuming his part of the responsibility.

A CIVIC PROJECT

With the idea of providing a problem in leadership, the children of both the senior and the junior opportunity rooms were asked to formulate a rating card which might be used throughout the middle grades and the opportunity rooms for the purpose of helping each child to analyze his conduct and thereby improve it.

At the suggestion of the children, a committee for this purpose was appointed in each opportunity room. A student teacher served in an advisory capacity, but she helped them only when requested and then only by suggestive questions or by the use of illustrative material. For example, she told them of similar score cards which had been worked out elsewhere and permitted them to examine some new report cards which had been prepared by a committee of teachers. Some of the children had helped formulate a score card for use in physical-training classes and were ready to make valuable suggestions to the committee.

A score card prepared by each of these committees was referred to a new committee composed of representatives from each of the original committees, who, in turn, worked out a new card from the two which had been prepared separately. This card was again revised after a consultation between the members of the last-mentioned committee and the writer of this book. The revised card was submitted to the members of both opportunity rooms for criticism.

In the preparation of the card the various items listed were entirely the children's suggestions; but these, of course, reflect the standards and ideals which we have held before them. Occasionally, in the expression and arrangement of the items, help was given.

The rating card shown on pages 145–148 is the result of this effort:

Training School
UNIVERSITY OF CALIFORNIA
Southern Branch

PROGRESS RATING CARD

....
Name *Grade*

Explanatory Note

This rating card was made by committees composed of children in the training school, student teachers, and the training teacher.

It is to be used by the children and the teacher for the purpose of measuring the child's growth in social and civic life.

The first rating is to be made by the child himself. The second is to be made by a committee composed of children elected by the class, student teachers, and the training teacher.

	First Report				Second Report						Third Report					
	Child's Rating		Comm. Rating		Child's Rating			Comm. Rating			Child's Rating			Comm. Rating		
	Yes	No	Yes	No	No Improvement	Some Improvement	Decided Improvement	No Improvement	Some Improvement	Decided Improvement	No Improvement	Some Improvement	Decided Improvement	No Improvement	Some Improvement	Decided Improvement
I. Habits of Refinement:																
1. Are you prompt?																
(*a*) In getting to school																
(*b*) In beginning work																
(*c*) In responding to requests																
2. Are you neat?																
(*a*) Do you keep the room in orderly condition?																
1. Bookcases																
2. Desks and tables																
3. Floor																
4. Chairs flat on floor																
5. Sand table																
(*b*) Personal appearance																
(*c*) Personal belongings																
3. Are you quiet?																
(*a*) In moving about the rooms and halls																
(*b*) In study																
(*c*) In necessary conversation																
(*d*) Do you refrain from talking unnecessarily?																
4. Is your posture good?																
(*a*) Standing																
(*b*) Sitting																
(*c*) Walking																
5. Do you use good language?																
(*a*) Correct English																
(*b*) Avoid slang																
(*c*) Correct pronunciation																
(*d*) Correct enunciation																
(*e*) Modulate your voice																

	First Report				Second Report						Third Report					
	Child's Rating		Comm. Rating		Child's Rating			Comm. Rating			Child's Rating			Comm. Rating		
	Yes	No	Yes	No	No Improvement	Some Improvement	Decided Improvement	No Improvement	Some Improvement	Decided Improvement	No Improvement	Some Improvement	Decided Improvement	No Improvement	Some Improvement	Decided Improvement
6. Are you courteous?																
(*a*) In speech and manner:																
1. Do you refrain from interrupting?																
2. Do you listen to others attentively?																
(*b*) Are you respectful?																
1. Of others' time																
2. Of others' feelings																
3. Of others' property																
4. To older persons																
7. Are you a good sport?																
(*a*) Do you win modestly?																
(*b*) Do you lose cheerfully?																
(*c*) Do you refrain from arguing?																
(*d*) Do you refrain from cheating in work or play?																
(*e*) Are you able to stand teasing?																
(*f*) Do you tease unkindly?																
8. Do you know the difference between tattling and giving the teacher necessary information?																
9. Can you control yourself?																
(*a*) temper																
(*b*) joy																
(*c*) sorrow																

	First Report				Second Report						Third Report					
	Child's Rating		Comm. Rating		Child's Rating			Comm. Rating			Child's Rating			Comm. Rating		
	Yes	No	Yes	No	No Improvement	Some Improvement	Decided Improvement	No Improvement	Some Improvement	Decided Improvement	No Improvement	Some Improvement	Decided Improvement	No Improvement	Some Improvement	Decided Improvement
II. Study Habits:																
1. Do you study independently?																
2. Are you:																
(*a*) Accurate?																
(*b*) Industrious and persevering?																
(*c*) Willing?																
(*d*) Interested?																
(*e*) Progressive?																
3. Attitude toward criticism:																
(*a*) Honest?																
(*b*) Sincere?																
(*c*) Friendly?																
(*d*) Modest?																
(*e*) Dignified?																
(*f*) Thoughtful?																
(*g*) Kind?																
(*h*) Helpful?																
4. Do you criticise your own work?																
5. Do you criticise others honestly?																
III. Social Habits:																
1. Do you make it easy for your teacher and classmates to work?																
2. Do you know when and how to laugh?																
3. Do you know when and how to enjoy yourself?																
4. Do you encourage others?																
5. Do you take care of and save school property?																

Dates of ratings: ..... *Parent's signature:* .....

CHAPTER TWELVE

Enrichment of Curriculum — The Writing of Poetry

The writing of poetry constitutes a medium of expression for the child's emotional and spiritual nature for which the ordinary course of study makes no provision. During the past term two hours weekly have been set aside in the opportunity room as a time which the children might use for verse writing.

In the initiation of this course we tried to guide rather than to teach, and to inspire the children to a spontaneous expression of their thoughts and feelings in verse. It was our aim to arouse in each child an interest in poetry and a desire to write it. To this end, poems written by children or by adult writers of children's poetry, such as Stevenson, Field, and others, were read to the class. With the exception of the suggestion that "nature poems are always good," the children of the junior opportunity division were left free to choose their own subjects. In the senior division the subjects of the first poems were suggested by a study of a varied selection of beautiful pictures. Thereafter the children chose their own subjects, writing of daily incidents: a shower, a strong wind, the holidays, or anything of interest to them. Sometimes a walk on the campus or a trip into the hills inspired a theme for metrical composition. A few good poems were written as a result of themes dictated to the class.

Although the course has been largely inspirational, incidentally a considerable amount of technique has been taught. Through the reading of the poems to the children they became conscious of the regular recurrence of accented syllables. A visual presentation of this was also given by writing of poems on the board. The accented syllables

were marked and the lines divided into feet, after which children and teacher scanned the lines together. In this way the children soon learned to detect and correct irregularities in their own verse.

The poems which are reproduced represent a part of the results of less than three months' work, and include in some cases the child's first poem. All were written in the schoolroom. No help other than suggestive questions was given any child by either the teacher in charge or by other members of the class. The poems are not reproduced here for their literary value, but merely in order to illustrate what can be accomplished in poetic composition by any class of exceptionally bright children of corresponding age. We believe, however, that two or three of them have considerable merit.

Thoughts

(M. D. Written at age 10 years 10 months.)

I love to sit upon the shore
  When waves roll in from sea;
They break in foam so soft and white,
  And bring bright shells to me.

And as I gaze upon the shells
  I think of distant lands,
Where other lads may sit and dream
  Upon the golden sands.

A Storm

(M. D. Written at age 10 years 10 months.)

The waves are breaking by the cliff
  They roll and roar and crash
And up against the rugged rocks
  They wildly madly dash.

The wind blows strong, it howls and shrieks
  The gulls go screaming past
And then from out a leaden sky
  The rain falls thick and fast.

But soon the storm clouds break away
  I see a patch of blue;
The wind dies down, the sea grows calm
  The sun comes smiling through.

The Christ Child

(M. D. Written at age 10 years 11 months.)

In Bethlehem one holy night,
  The Christ Child came to earth,
And guided by a great white star,
  The shepherds came to bless his birth.

And wise men brought their gifts to him
  And worshipped at his feet;
While music rang through heaven and earth,
  A music, rare and sweet.

And angels chanted through the night,
  "O earth, rejoice and sing,
For unto you tonight is born,
  A Savior and a King."

Hunting Fairies

(E. B. Written at age 11 years.)

I've hunted high and low
In every place I know,
  For the fairies.
I've looked in every nook
And down beside the brook
  Near the cherries.

But nowhere have I found
In the air or on the ground,
Those fairy folk.
I've peeped among the leaves
And underneath the eaves;
It seems a joke
That fairy folk so very small,
Can hide from me who am so tall,
And never can be found at all.

Little Birdies

(E. B. Written at age 11 years.)

Up in the tree-tops,
Far above ground,
Wee little birdies
And mother are found.

She sings them a song
So merry and sweet
Then goes for some worms
For babies to eat.

After their dinner
They say "peep, peep"
And under her wings
Through the night time sleep.

Springtime

(E. B. Written at age 11 years.)

When you hear a bluebird sing,
That's a sign that it is spring;
Then the flowers begin to peep
Out of mother earth's kind keep.

Then the trees rock to and fro,
And the buds begin to grow;
Little streams flow merrily,
While the birds sing cheerily.

The Merry Raindrops

(R. D. Written at age 11 years 5 months.)

Some merry little raindrops
Came running out one day,
They danced among the flowers
And had a jolly play.

They wet the violets so blue,
The roses got some spray,
As they danced among the flowers
And had a jolly play.

The Rain

(R. D. Written at age 11 years 7 months.)

They measure rain by inches,
But why I cannot say,
It doesn't fall in inches,
It falls in silver spray.

Twilight

(L. A. Written at age 11 years.)

The clouds are gray on a golden sky,
  Tinged with light from a hidden sun,
The brook creeps softly through rushes,
  Murmurs sweetly to drowsy birds
As twilight falls on the darkening world.

Christmas is Here

(H. K. Written at age 9 years 10 months.)

Christmas eve is very near;
Then dear old Santa will be here;
He'll bring a great big load of toys
For all good little girls and boys.

"We'll all be good" the children shout,
As they dance and play and run about;
"Then Santa Claus with laughing eyes,
Will bring a great big glad surprise."

When Santa Comes

(H. K. Written at age 9 years 10 months.)

When Santa comes to our house,
We're all as quiet as a mouse;
But when he leaves upon his route
We all jump up and give a shout,
And rub our eyes and look about.

Simple Beauty is the Best

(K. W. Written at age 9 years.)

Simple beauty is the best,
Take a lily simply dressed,
Place it by a tulip gay
Clad in all its bright array,
Lily fair will win the day.

Little Marigold

(K. W. Written at age 9 years.)

Pretty little marigold,
So sunny and so bright,
Through all the autumn days,
You cheer us with your light.

The Fairies

(M. C. Written at age 10 years 7 months.)

One day some fairies small,
Looked down from their home so high,
And saw the flowers all
Weeping and drooping and dry.

Their tiny tender hearts
Were touched with sorrowful grief
Their tears dropped down to earth
And cheered many a leaf.

The Clouds

(J. B. Written at age 10 years 8 months.)

Today the clouds are breakers in a stormy sea,
They roll and toss until they almost frighten me;
And yet the clouds I saw but yesterday,
Were fleecy lambs that in the quiet meadows play.

The Rainbow

(E. G. Written at age 10 years 3 months.)

Oh rainbow, so beautiful,
With colors rich and gay,
You are like a ribbon bright
Or flowers that bloom in May.

Oh rainbow, so beautiful,
You look on earth and sea;
If fairies could my wishes give,
A rainbow I would be.

Sunset

(B. J. Written at age 12 years 3 months.)

I sat upon a mossgrown rock
That overlooked the sea;
I gazed upon the waters blue,
The waters smiled at me.

The sun went down behind the west,
The sky was blood and gold,
And all the clouds that drifted by
Were clouds of fleecy gold.

The Snow

(C. P. Written at age 10 years 3 months.)

The snow blows through the town
  Like a mattress full of down;
It covers up the autumn leaves
  And reaches nearly to the eaves.

Little Ching Chong

(L. G. Written at age 13 years.)

Little Ching Chong
Lived in far Hong Kong,
But he always sang this
    little song;
"I'm a leetle Chinee,
But I want to be,
In Americee."

Then blossom time came,
All pink and white
Sweetening the morning air,
Perfuming the night,
But little Ching still used to sing,
"I'm a leetle Chinee,
But I want to be,
In Americee."

Then summer time came,
To sunny Hong Kong,
But still little Ching,
Sang his quaint little song,
"I'm a leetle Chinee,
But I want to be,
In Americee."

But when bright spring
    came another time,
Little Ching Chong was
    in quite a different clime.
And he sighed no more for
    Americee,
But sang this little song
    so sadly,
"I'm leetle Ching Chong,
And my heart, he does long
For old Hong Kong,
Where I belong."

My Mirror

(L. G. Written at age 13 years.)

When I look into your shining face,
I see my counterpart,
And though she is not real at all,
I hold her in my heart.

Koppelberg Hill

(L. G. Written at age 13 years.)

As the children entered the Koppelberg hill
They gasped with wonder and then stood
    still;
For they were standing upon the sill
Of a wonderful land inside of the hill;
They gazed and gazed and then stood
    mute
At the trees all covered with bonbons
    and fruit.
They felt so happy and merry and gay
And all of their sorrows had passed away;

They saw in the distance a shining bay
And there was no night, only sunshiny
day.
And fairies danced and children sang
And o'er the hills sweet laughter rang.
The sky was always lovely and blue
And the children wore satins of silver
hue;
All loved each other and all played fair,
And flowers were blooming everywhere.
The rays of the sun shed perfume sweet,
And music tinkled for tripping feet.
And joy and mirth reigned the livelong
day,
Yes that was the happy land of Fay
Where the children followed the Piper
that day.

The Pine Tree

(L. G. Written at age 13 years.)

Dear little pine tree, standing
all alone,
Ornamented only with one
be-draggled cone,
You soon will be resplendent
with globes and balls of gold,
When you are dragged into the
warmth from out the snowy cold,
And when the children see
you, in your grasp you'll hold,
Lovely Christmas presents for
both young and old.

The Violet

(B. R. Written at age 10 years 1 month.)

Pretty little violet
Growing in the lane,
Do you love the sunshine
And the merry rain?

Modest little violet
  Bowed her pretty head,
"I love the sunshine and the rain,"
  Timidly, she said.

HALLOWE'EN

(R. P. Written at 12 years 5 months.)

On All Saints Eve, just
  once a year,
The elves and fairies bring
  mortals good cheer,
They frolic and dance,
They giggle and prance,
But at break of dawn they
  all disappear.

CHAPTER THIRTEEN

Enrichment of Curriculum — Descriptive Writing

As a second experiment in curriculum enrichment a course in descriptive writing was initiated. The class included four children, the two boys who were doing post-eighth-grade work and two girls from the eighth-grade group. The chronological ages of the children at the beginning of the course were 9, 11–3, 12–3, and 12–11.

At the time of this writing, three months after the beginning of the course, it is still too early to draw final conclusions. The number of children tested is perhaps too small to warrant conclusions, although the results may indicate possibilities.

The subject matter used and the method of treatment employed have been a modification of what might be effectively used in college classes with adults. The student teacher has made opportunities for the child to observe, imagine, and feel and has tried to develop an understanding of the elementary principles of the technique of descriptive writing.

The work fell primarily into two lines: first, analyzing good descriptive passages by eminent authors; second, writing descriptions which would satisfy the requirements of good English composition. In the beginning the children and student teacher working together analyzed descriptive passages presented by the teacher. Later the members of the class found and presented material for study. In analyzing descriptive passages their problem included classification, method employed by the writer to obtain given results, and criticism. Through this procedure they discovered for themselves the elementary principles underlying descriptive writing. In writing descriptions their problem was to apply the principles worked out by the class. All have been in-

tensely interested and have done good work. One child has written most prolifically. We submit some of the work of each member of the group.

An Old Toy

(R. P. Written at age 12 years 3 months.)

He was an old, old, wooden rocking-horse, hidden behind a trunk in the farthest corner of the attic. There was a hole in his neck, through which a little boy of past years had put marbles, sand, and stones. One eye and an ear were gone, and one of the rockers on his feet was very loose. He had once been red, but now the paint was nearly all scraped off of him, especially on his back and sides, where the bare wood showed through.

But still he stood as prim and proud as he had done when new, and I imagine he was hoping for the day when someone should take him down from the dusty attic and a little boy should ride on him once more.

A Face

(R. P. Written at age 12 years 3 months.)

The man is suspected of having committed murder, but he is in reality innocent. He has been brought into court, pronounced guilty by the jury, and sentenced to fifty years imprisonment by the judge. After two years in jail, the dreary monotonous life, and the knowledge that he has to stay confined for forty-eight years longer, fills him with despair, and he becomes almost like a wild animal. He is no longer a man, but an infernal beast. Then he sees the judge, the man who has condemned him to this fifty years of living death, and he snarls with hatred, and glares at him with glassy eyes. He gnashes his teeth, and the great veins in his forehead stand out like wires. He is thinking what joy it would be if he could only break the few iron bars that separate him from this man, liberty, and the wide world. He claws at the bars and pounds on them with all his might. But it is all in vain, and he sinks back onto the floor of his cell, grinding his teeth, venting his rage and despair upon the stone walls, feeling powerless and a victim of the cruel world.

A Deserted House

(R. P. Written at age 12 years 5 months.)

I rode out in the country one day on my bicycle. The day was hot, and becoming very thirsty, I stopped at what appeared to be a farmhouse to request a drink.

I looked for a doorbell, but found that there was none. Then I knocked, stopped and listened. Nothing was heard except a far off echo, coming with a suddenness that made me start. So I opened the door, which creaked on its rusty hinges, and stepped inside.

The first aspect of the house was enough to alarm anyone. In spite of the bright daylight outside, the house was as dark as a tomb. Mice scuttled across the floor, thick with the dust of years, and disappeared into holes. Great black spiders sat in the middle of countless webs. The rotten boards of the floor creaked beneath my tread. Over all was an atmosphere of gloom, depression, and tenseness. Everything seemed to resent my intrusion, and I dared not utter a word, for I imagined that the spiders would spring at me for breaking the silence.

The house seemed to have been left in a hurry, and there were traces of a struggle. I saw, when I became used to the darkness, that the rooms were littered with various objects. Books appeared to have been flung about, and lay scattered about the floors. A table and two chairs lay overturned. In the farthest corner of the parlor was a pile of half burnt newspapers, looking as if some one had started a fire, and then some one else had extinquished it. A pile of old packing boxes barricaded the kitchen door, and I had to push three of them to one side before I could pass through. In the kitchen was a loaf of mouldy bread and some unwashed dishes on a table.

I was thoroughly frightened by this time. Every time the boards creaked under my feet, I started, imagining it to be the step of something else than myself. I took one peep into the cellar, in one of the corners of which was a dark shape huddled up as if about to spring. This was the last straw. I rushed out of the house, and slammed the door.

Outside in the bright sunlight, my courage revived. I turned to look at the exterior and the yard. Not a window had escaped being broken, and the shutters on some of the upper windows were dangling on one screw. The garden was overgrown with weeds, and a

big cottontail rabbit hopped in and out of them. The last thing I noticed, and the worst, was a small statue in a pool, weird and horribly grotesque, looking something like a frog, and something like a serpent, eyeing me as I rode away on my bicycle.

Millspaugh Hall

(R. P. Written at age 12 years 4 months.)

Millspaugh hall, the main university building, is built of stone and brick. Its shape resembles that of the Sphinx, the dome and center portion being the head, the either wing the paws. It is stately, well balanced, and altogether is quite a handsome building. The green vine on the walls contrast pleasantly with its background of dull reddish-brown brick. The big window over the three arched entrances could be compared to an eye in the middle of a giant's forehead. The fir trees on either side look like green icicles turned upside down.

The Beach

(R. P. Written at age 12 years 6 months.)

This is a glimpse of the seashore in summer at about two o'clock in the afternoon.

All along the beach, about ten feet beyond the reach of the breakers, there are groups of people, sitting, standing, stooping, conversing and pointing under big gorgeous orange and black beach umbrellas. Every little while someone darts from the cover of an umbrella and goes into the water, running fast at first in the shallow water, but wading slowly in the deeper water beyond.

There are people coming out, and going in. The majority of the bathers are young men and young girls, although there is a sprinkling of middle-aged men and women, together with an old man here and there, old veterans, who have "been in" many hundred times, and who even now, "stay in," longer than the rest. Old lady *swimmers* are scarce, although there are plenty of old lady picnickers under the umbrellas.

You can hear the girls screaming as a wave rushes over them, the men shouting to one another, and above all, the monotonous booming of the breakers against the beach.

Isola Bella

(L. G. Written at age 12 years 11 months.)

It was a scene, at once silent, majestic and lonely. Rugged old mountains encircled it as if guarding that sapphire lake so carefully hidden in their midst. One tall old mountain silhouetted against the evening sky stood like a grim old sentinel, a mass of gleaming snow upon its rugged peak.

Then the lake itself glowed with the color imprisoned in its depths; except where the shadows lay mazes of purples and sombre blues. But where the last rays of the sun tipped the ripples, it banished the whispering shadows touching the silver foam into a thousand irridescent, gleaming bubbles of transparent silver.

Then as the gigantic shadows of the watching mountains cast exaggerated shadows over the placid surface of the lake and the twinkling stars wink down out of the sky the Italian dream night comes. Thro' the centuries the lonely mountains have stood passive guarding the jewel entrusted to their care.

Notre Dame

(L. G. Written at age 12 years 11 months.)

Notre Dame, the famous old cathedral has a kind of comforting somberness that is quieting to the troubled spirit. The calm quietude of its lofty dome and the glorious loveliness of its marvelous stained glass windows lift one's spirits to that realm of endless joy and happiness. Then from the deep recesses one can see tiny twinkling lights from the tiny altars before which the peasants or "grandes dames" kneel devoutly; to lay their hearts white and clean at the feet of the little Saviour, smiling down on them so sweetly from the dome of the cathedral.

Color

(L. G. Written at age 13 years.)

The storm at length abated leaving the sky a pearly gray. Then the sun sent glorious rays of brilliance across the sky and across the gray shot a multitude of colors forming a glorious arch. It was the rainbow, the arch of promise. The oranges, reds and yellows glowed like living fire. The deep blues and purples gave out a

majestic somberness while the cool greens half hid the blushing roses. Then as I looked again, I saw the superb arch fade and pale till t'was only tinted mists in the heavens.

The Auction

(L. G. Written at age 13 years 2 months.)

It was very hot. The dust was in everybody's eyes and there was hardly room to stir, so large was the crowd in front of the auction box.

At the moment an enormous fat man with beads of perspiration standing on his brow from the exertion of oratory, was displaying a bargain. His small beady eyes, sunken in folds of flesh, were beaming on the multitude. He was narrating in a hoarse voice in a sing-song tone the wonders of the coat he displayed to the public. The coat was of brilliant purple with a broad blue stripe. The lining was of flowered silk in a pattern of gorgeous red roses.

"Here's a coat that will set all the gals fer you. Neat and dandy and the latest style! Come on now folks this is the bargain of the season! Ten, twenty, thirty cents! Ah! There's Sam! good for you — Forty cents folks only forty cents!"

A lively bidding started as all the negroes in the crowd seemed desirous of purchasing the glorious coat.

Finally a long lank negro with yellow shoes and green trousers blushingly stepped forward to receive the prize. The fat man slipped the wondrous garment over his angular shoulders. The sleeves of the coat reached nearly up to his elbows but he skipped off, smartly swinging his gold headed cane, and all unconscious that "Solomon in all of his glory was not arrayed like one of these."

The fat man then took his departure to a near-by restaurant where he could pack himself to the utmost capacity.

He was replaced by a small man with a bulbous red nose which shone above the crowd as the sun when the light struck it. This personage had a high nasal voice which soared to heights unknown at the end of each sentence.

It became unbearably hot. The sun beat down unmercilessly upon the crowd which gradually thinned, but still the little man went on. Finally he awoke with a start to find he was reciting his monologue to a company of wide eyed negro children. He thereby took his departure much disgusted that the public didn't know a good piece of oratory when they heard it.

A Patch of Color

(L. G. Written at age 13 years 2 months.)

It was eleven o'clock in Rotterdam, Holland and the morning sun shone down upon 10 year old Willem and tiny baby Gretchen.

All was bustle and hustle around them. The fat rosy housewives were hurrying off to market, their blue and purple dresses and shining white aprons set off by their brilliant petticoats showing below.

The blue, blue sky with its fleecy white clouds was reflected in the blue waters of the canals. The tall dull colored houses with their bright red walks were as clean as if they had just come out of the bathtub.

Willem lay flat on his stomach sailing his new sail boat and now comes the mysterious "patch of color." For on Willem's black, baggy trousers was a brilliant red patch.

This patch was peculiar as to shape as it began with a perfectly good intention to be square and then decided to become triangular, so when it had finished it was no shape at all. Then, too, the patch was stitched on with green thread. This particular patch had always been the pride and joy of Willem's life and the envy of his friends. But now we will say goodby as Willem's fat rosy face is displayed to view and the patch of color we no longer see.

A Beggar

(L. A. Written at age 11 years.)

He was clothed in a very ragged brown suit of clothes. The brown was nearly all faded out while the suit was patched with rags of so many different colors that it really looked like a rainbow. The trousers which formerly extended to the ankles were now frayed out nearly to the knees. He wore no coat and his shirt was merely a faded red one with sleeves of rags. His shoes did not afford much protection as there were large holes in the toes and heels. None of his clothes fitted very tightly as he had grown thin from hunger and sleeplessness. On his face, there showed, beneath the dirt, a look of anxiety and care. His eyes were sunken deeply in his head and his hair was long and matted. He looked very forlorn and helpless as he slowly walked down the street begging.

A Chicken

(L. A. Written at age 11 years.)

His wattles nearly three inches long hung down from a great head, covered with stubby feathers. It was topped by an enormous brilliant red comb the back of which had been pecked off in fights with an elderly black rooster. His neck and back were the largest I have ever seen. They were covered with red feathers besprinkled with a few black ones. His great pride was a magnificent tail with long feathers falling in graceful curves. Supporting his body was a pair of large and sturdy legs. His spurs were two inches long, terminating in sharp points which were his main weapons of defense and attack during battle. All together he was a perfect specimen of Rhode-Island Red rooster and after many defeats at the hands of our black rooster, he finally won a glorious victory and the leadership of our chicken yard.

A Spring Morning

(L. A. Written at age 11 years 1 month.)

As I looked out of our window, I saw a wonderful scene. There had been a slight rain in the night and the dew on the grass glittered like diamonds. Just then the sun rose into sight above the hills. The sky reflected many brilliant reds, oranges, and golds. The snow-white clouds were tinted with pink. The leaves of the eucalyptus trees appeared to be of burnished gold, while the birds which were perched on the branches twittered and sang joyfully.

Gibraltar

(L. A. Written at age 11 years 6 months.)

The majestic and gigantic rock outlined against the sky was Gibraltar. Around the foot of its tall side there clustered the houses and stores of the town of Gibraltar. It's top was dotted with small bushes and cactus. In the foreground the sea lapped gently over the beach. The whole rock seemed to lie there as a sleeping giant guarding the gateway to the Mediterranean.

The Hollywood Hills

(E. B. Written at age 9 years.)

As I look at the Hollywoods hills they become hazy and clouds gather over their summits, as though the giant of the hills was smoking his pipe in the seclusion of the inner recesses of the mountains. They look as though some huge giant had been turning over in his long sleep underground thereby dislodging the surface, they are so rugged. At other times they have a calm, benign, peaceful look as though they were old preachers who have done their work in life. Then, when I am troubled, they comfort me. At evening, they fade away into the darkness as little children who have been put to bed. Altogether they have many moods and looks and all are beautiful.

Circus Day

(E. B. Written at age 9 years.)

The big, square lot on the corner of Main Street was being used for the Circus (this is written with a capital C because it was of such importance to the little town). During the period before the time set for the great event, the superstitious might well have crossed themselves, for many curious eyes, their owners carefully hidden from the busy circus tent pitchers, were peering from behind fences, outhouses, and other convenient places. When the hour came there was a great crowd, all in their best, to welcome it. The mob was a riot of color. Red, blue, and green predominated over the other colors and the odor of cheap perfume was stifling. The parade had taken place earlier in the day and the crowd was very excited over the prospect of seeing the wonders displayed on the flaring cars. The children stuffed themselves full of popcorn, candy, peanuts, hot-dogs, and other circus-day dainties, and carrying gaudy toy balloons proceeded to enjoy the show. The less fortunate ones heard the shouts when somebody did something particularly wonderful and when one of the acrobats did another hair-raising stunt on the highest trapeze. They walked mournfully about the circus grounds and got their only share of the show, the odor of peanuts, popcorn, and soda-water, and the contemplation of the gaudy show-bills.

In the Pied Piper's Land

(E. B. Written at age 9 years 1 month.)

"For he led us, he said, to a wondrous land,
Joining the town, and just at hand,
Where fountains gushed and fruit trees grew,
And everything was strange and new."

In the mountain side there opened a door, revealing a land as bright as Beulah. Mother Nature, who had been repining for children to fill the air with gay laughter, raised from her dark cave and welcomed them. The flowers were given bright, new clothes to welcome their coming. The fruit trees immediately hung inviting fruits from their blossom laden boughs. Fountains that had been hiding in dark mountain cliffs, gushed forth for very joy.

When the children were hot and tired from play, the kind trees waved their arms, making a delightful breeze to cool them. When they were hungry, a table on which milk and cookies and all goodies that children like, appeared before them, set by unseen hands.

At night when they felt homesick for their loved ones the kind and loving trees crooned soft lullabies and sent them lovely dreams of many other happy days to come.

Hamelin Town after the Departure of the Children

(E. B. Written at age 9 years 1 month.)

"And piper and children were gone forever."

In the Pied Piper's land all was bright, but Hamelin Town presented an entirely different scene. On the street where the children were last seen, no mirth existed. The people wore sombre clothes and sad looks. The little lame boy repined and could not be comforted. He had been left behind when all of his comrades had entered the wondrous land of which the piper sang.

The Mayor, the councillors, and the people regretted that they had not given the Pied Piper what he asked. "For," said they "Are not our children worth more than one thousand guilders?" Messengers were sent to every country to find the Pied Piper and the children, but they could not be found.

In the homes there was much mourning. Fond mothers fondled their children's toys. Fathers, ashamed to show their weakness,

hid in barns and cried. Some people blamed the Mayor and the councillors, but others said, "How could they know?"

The little lame boy said, "My comrades gone, life is no longer happy. Let me go too!" But his parents held him tightly, trying to comfort him. Only one child was left and they wanted to keep him. Day after day he wandered through all the spots he and his comrades had loved best. His cheeks, which had always been pale, lost every vestige of color which had remained. He grew more and more melancholy and sad as the days drew on.

The most forlorn spot, perhaps, barring the childrens' homes, was the toy shop. The long rows of toys that could never make little children happy were very depressing to the spirit. They did not close the toy shop, for the parents thought surely the children would come back sometime and would be happy to find the toys awaiting them.

In the Pied Piper's land, the children were having everything to give them joy. But in Hamelin Town all was sad and gray. The very skies seemed to cry. In the Pied Piper's land, the skies seemed to wear a perpetual smile, so happy were the children they sheltered. Oh! what a contrast to see Hamelin Town so gray and drab. Now wasn't the Mayor punished for being so greedy!

CHAPTER FOURTEEN

Enrichment of Curriculum — Public Speaking

Inasmuch as the ability to talk convincingly and effectively is conceded to be a valuable asset in social and professional life, public speaking has been made a regular part of the curriculum. It is not our aim to prepare for the rostrum or the pulpit, but to give every child training in expressing himself before his fellow pupils in clear, forceful English. This subject is therefore closely correlated with all the other activities of the school. By much experience in speaking, both formally and informally, the child loses the self-consciousness which marks the efforts of many adults and expresses himself with ease, poise, and decorum.

Very definite instruction regarding the preparation of the speech is given by leading the child to discover the principles underlying the technique of public speaking and by encouraging him to set up his own standards of achievement.

No less valuable than the making of the speech itself is the opportunity for the listeners to make constructive criticism. It is expected that each student in criticizing another's work shall first point out some of its excellence. Then any adverse criticism must be substantiated by reference to standards outlined by the class. This ability to give and receive intelligent criticism stands the student in good stead in class and out.

Stenographic reports of speeches delivered by a number of the children reported in this study are presented in this chapter. None was written before delivery. In each case the child prepared an outline but delivered his speech without notes.

The Evolution of the Book

(Delivered by R. P. at age 12 years 4 months.)

The first known writings were those of primitive man on the walls of caves. These were picture writings, usually of the animals he hunted. They closely resembled those of our American Indians. The next form of writing was that of the Babylonians and Chaldeans, written on tablets of baked clay. Here is a picture of the Babylonian clay tablets written on in cuneiform. This is a piece of Assyrian sculpture, also written all over in cuneiform.

Next in line came the Egyptian hieroglyphics which closely resembled the cuneiform. They were weird pictures in circles, very hard to decipher, and indeed no one knew what any of them meant until in 1801 when the Rosetta Stone was discovered. The Rosetta Stone was a three-sided slab of marble commemorating the victories of an old Egyptian king, and was written on in three languages — Egyptian hieroglyphics, demotic Greek, and classical Greek. One of these kinds of Greek was known, so that the hieroglyphics were deciphered after forty years of hard work. Here is a picture of the Rosetta Stone with the Egyptian hieroglyphics at the top and two forms of Greek below.

Here is another picture which will give an idea of what hieroglyphics were like. The oldest known writings were found in the tombs of the dead. This and many other writings were excavated from tombs. Here is a reproduction of a page from the Book of the Dead. It represents a man and his wife awaiting judgment in the Egyptian heaven and here is a sort of demi-god weighing their hearts against a feather, and back further is a queer sort of beast ready to eat them up if their hearts should prove heavier than the feather.

Next we find the Sanscript or sacred writings of India. These were written on paper made from prepared palm leaves. The Chinese used character writing and very early invented block printing. On account of the immense number of their characters this was not widely used. They also wrote with a brush and varnish on silk as they still do today.

In Judea we find the Mosaic law on slabs of marble. The Hebrews also wrote on rolls of parchment. This became very popular. In Mediæval times came the rise of Christianity. Monks in monasteries made Books of translations from the Greek. They wrote very slowly and often took a life-time to finish a single book. The illuminated script was developed about this time. One of these books

thus preserved is the Book of Kells, the original of which is in the University of Dublin in Ireland.

Then came the age of printing. Johann Gutenberg invented the printing press. This is the most important step in the evolution of the book. People before could not buy books because of the high price and expense, but now all, from the richest to the poorest, were enabled to buy books of the new kind, as they could be done so cheaply and quickly. The very first book ever printed was the Gutenberg Bible which is now owned by Mr. Huntington in California. The art of printing then spread to Spain, France, Ireland, and finally to England. The Horn books, of which this is a facsimile, were used in the schools all over England until the latter part of Elizabeth's reign. They had the alphabet, numbers from one to ten, and the Lord's Prayer.

Thus ends the evolution of the book. In 1918 twenty thousand new books were published, not counting the many new editions and thousands of copies of each of these books.

Story of Mighty Animals

(Book report given by R. P. at age 12 years 4 months.)

Millions of years ago after the earth had passed through what is known as its formative period there came the Mesozoic Era, in which the giant reptiles which I am going to tell you about flourished.

These giant reptiles were the Dinosaurs, or terrible lizards. These Dinosaurs were the largest creatures that ever walked the surface of the earth, and one of them, the Atlantosaurus, is supposed to have been eighty-five to one hundred feet in length and twenty-five to thirty-five feet in height. There were two classes of these Dinosaurs, the flesh eaters and the plant eaters. There was always war going on between these two classes. They would attack one another with great ferocity. The flesh eaters usually had the best of it, and although they were the smaller of the two they usually came out first in battle. There were several different kinds of these Dinosaurs. Two of the plant eaters went by the names of Brontosaurus and Diplodocus. They were about eighty feet in length and twenty-five feet in height, and when they wanted to see what was going on they could just raise themselves on their hind legs and look over the tops of the trees. When running they could take about ten yards a step. The Brontosaurs and the Diplodocus were the largest plant eaters and they were the mainstays of the class of plant eaters.

When they were attacked by a flesh eater, they could depend upon the strength of their enormous tails. Several times they won the battle by using their tails to sweep the flesh eaters off their feet, and then crushing them to death. There were some of these plant eaters which were so hideous and well-protected that hardly any of the flesh eaters would ever come near them. One of these was the Stegosaurus. He was all covered with a hard scaly cover which made it almost impossible to hurt him. On his tail were several spikes which he used with great advantage. Another one of these was the Triceratops. His head was all covered with a hard bony covering which made him impossible to attack in front. Besides, he had one horn about a foot long on the tip of his nose, and farther back he had two more horns, each about three feet long. Also he had a long tail like the rest of the Dinosaurs. Both of these creatures were sort of defensive plant eaters. They did not attack anyone and went about their own business. They did not do anything especial. They were not so ferocious as the rest. But there was one flesh eater that feared none of these, which was the Tyrannosaurus, or Tyrant Lizard. He was forty feet in length and he usually stood on his hind legs. He had a huge skull and jaws about two feet long. He was the most terrible Dinosaur that ever inhabited the earth. When the other animals heard him coming they fled at his approach.

You must wonder how we know that all these Dinosaurs lived in the first part of the earth's period. Scientists can tell from their skeletons, their habits and where they lived and how they lived. I will tell you how one of the Dinosaurs came to be buried in the rock. One day as a Brontosaur pulled himself out of the water, he was attacked by a vicious Allosaurus. The fight was terrific but at the end, however, the Allosaurus came out victorious and the Brontosaur floated dead on the surface of the lake. Flesh eating birds, or Pterodactyls that lived then, fed on the body of the Brontosaur till there was nothing left but the skeleton, which sunk to the bottom of the lake. Dead leaves and other driftwood covered it. Thousands and thousands of years' accumulation covered the skeleton of this Brontosaur, and a great pressure bore upon it. At the same time through a process which none of the scientists can really understand, the skeleton was also turned the same as the rock, or fossilized. Millions of years afterwards many earthquakes came and the earth was upheaved and at last this strata of rock, 5000 feet beneath the surface, came to the top, and part of the skeleton was exposed. The country was in Wyoming, in which this Brontosaur was buried.

One day three men came out to this country hunting for fossils. They were sent from a museum to make a collection of these skeletons. They pitched camp after hunting for many weeks, finding no fossils. They decided not to hunt any more. If they did not find any on this day they would go back to New York. Pretty soon one man returned to camp. He had not found anything. Then the second man returned. The last man stumbled across the open mouth and grinning jaws of this same Brontosaur that had fought for his life. A little further on he came upon part of his backbone. He told the other two men what he found. They could not find anything but his skull and a portion of the backbone. So they decided if there was any more of the skeleton, it would extend farther back into the bluff, at the foot of which the first discovery had been made. Sure enough, it was in the bluff. As they took out each portion of the rock containing parts of this Dinosaur they numbered them in the order that they had been found.

They mounted it and sent it to the museum. When the skeleton was taken from the rock and pieced together at the museum, they did it according to the numbering of the three men.

Besides all these creatures that lived on land, the sea was just teeming with life and hundreds of different creatures. There was the Ichthyosaur, or fish lizard. He was the despot of the sea in early times. The only other animal powerful enough to cope with him was an animal called the Plesiosaur. He had a long neck which gave him an advantage over the Ichthyosaur, which had a very short neck. Many and fierce were the battles which these two animals fought when they met, for they were the largest of their kind in the sea. The Ichthyosaur usually won, because he was the swiftest and most dextrous. But sometimes the Plesiosaur also won. One time a scientist found a skeleton of a Plesiosaur with the skeleton of the smaller Ichthyosaur inside of it. This probably proved that the Plesiosaur conquered the Ichthyosaur sometimes.

All these animals are extinct today and other smaller animals with larger brains have taken their places.

The Origin of the Theatre

(Delivered by L. G. at age 13 years 2 months.)

Long, long ago in ancient times the Greeks worshipped many gods. There was the god of the sea, the god of war, and many other gods. One god in particular was very popular and well liked. This was

Bacchus or Dionysius, the god of wine. He was as well liked in fact as the god of the soda fountain would be today. He was supposed to live in the vineyards and his followers and retainers were half goat and half man. They wore wreaths of ivy around their heads and sang and danced and played upon the flute all day long.

Every year there was a festival celebrated in honor of Bacchus. All the most celebrated people in the town dressed up in goat skins and were in the procession bleating like goats while onlookers stood by and roared with laughter. Gradually however, this yearly festival became rather boring, for everyone was tired of seeing the same thing over and over again. So one day a bold man made a step toward the real theatre. He had somebody write a number of questions with answers that were very witty. Then he had two men stand upon a stage or platform and one asked the questions and the other answered them. Gradually this performance was more looked forward to than the procession of old. Each year more actors were added until in the great comedies and tragedies that are famed all over the world it came to be that the writers were allowed as many players as they desired and the chorus was often reduced to the onlookers.

As the years went on, each little town, no matter how small it was, came to have some kind of a rude theatre carved out in stone in the side of a hill. These theatres had tiers upon tiers of seats reaching skyward. These seats were arranged in a semi-circle about a flat space. On this space the actors gave their plays. There was a rude structure at the back of the semi-circle and here the players went to put on putty noses or to make up. They often wore masks to show whether they were supposed to be laughing or crying.

These theatres became still more beautiful each passing year, and now the ruins of them are cherished and kept all over the world. Here is a picture of a theatre built in honor of Dionysius, the god of wine. Most of these theatres were built in honor of him, because he was in fact the originator.

These beautiful theatres have been copied all over the world. A few years ago there was one copied by Yale University. It is called the Yale Bowl. In it have been given many beautiful plays and they try to carry out the original idea of giving Greek plays.

Many of the Greek theatres had beautiful carved stone seats and you were arranged when you were seated according to caste. If you were a nobleman you sat lower down and the poor people sat farther up. The seats in the Yale Bowl are beautiful carved stone seats, but you may sit where you wish.

Here is a program gotten from the Yale Bowl from one of the latest Grecian plays. It is probably hard for you to see how our marvelous comedies and tragedies of today have come up from a group of dignified men and women marching in a procession draped in goat skins and bleating like goats, but we have the ancient Greeks to thank for our beautiful theatres of today.

The Solar System

(Delivered by K. D. at age 11 years.)

The Solar System is made up of the sun, eight planets and the asteroids or many tiny planets between the four smaller and the four larger planets as the drawing shows.

There are many theories as to how the system was made and one of them is that at one time there was an enormous empty space in the center of which was a nebula which rotated slowly. In time it cast off the four larger planets, then the asteroids, and lastly the four smaller planets. It now remains as our sun in too dense a state to cast off anything else.

Mercury is the smallest planet and is so close to the sun that nothing could live on it. His year is eighty-eight of our days and is the same length as his days! Mercury is very hard to observe, is little larger than our moon, and on the whole is very unimportant.

Venus, the next to the sun, is the brightest planet, and although a dead world, she is very pretty. The length of Venus' day is claimed by some astronomers to be as long as her year of 225 of our days and by others to be about the same as ours.

The next planet from the sun is the Earth, and as everyone knows about it I shall not try to tell about it.

Mars is the farthest out of the four small planets, and is the only other one likely to be inhabited, but as I told about it in my other report, I will go on to the larger four.

After Mars come the asteroids, and after them comes Jupiter, the largest planet. His two great peculiarities are that he seems to glow with light he does not reflect from the sun and the second is in his belts of clouds. The first is accounted for by the theory that as he is so large he is not yet cool. Jupiter has now eight moons and with a year of eleven to twelve of ours is a very queer and interesting planet.

Saturn is the next planet in order and has one marvelous feature — his three rings. These are formed of myriads of tiny bodies like the

asteroids so far away from us that they look continuous! Saturn has an orbit of 29½ years and a very short day, but little else is known about him.

After Saturn comes Uranus, which is Herchel's planet, for one night that astronomer noticed a new planet and found that it had been recorded as a star seventeen times! As Uranus was the father of Saturn they called the planet by that name.

Little is known about Uranus or Neptune, but it is believed that they are still hot.

This finishes our solar system, beyond which lie the stars and other solar systems but some so far away that light takes hundreds of years to reach us and they have no pull on us as does our own solar system.

Mars

(Delivered by K. D. at age 11 years.)

Of all the planets Mars is the only one that would seem likely to be inhabited and is the one most like our own.

He is much smaller than our earth and the force of gravity is not so strong there as here so that a thing weighing one pound here would weigh only three quarters of a pound there.

When first accurately observed, Mars was found to be red and green with a sparkling ice cap at each pole. The astronomers called the green part sea and the red part land; but just then they found that the green part was bright in their spring, yellow in the summer, and brown in the fall and winter! Also the ice caps melted, till in late summer they dwindled down to almost nothing, and as they melted dark lines across the planet became darker and broader, first near the ice and then all the way to the equator! It was decided that these markings were canals; then some of these immense canals looked double and after a while single again!

Out of this grand mixup the theory was that the green was vegetation, the red, desert, the doubling of canals vegetation hiding canals in summer and in winter the trench making a single line.

No one knows if people live on Mars, and although communications may in some future age be had, with thirty-five millions of airless space between the two planets holiday trips to Mars will probably not become fashionable.

Armor

(Delivered by J. L. at age 12 years 3 months.)

I am going to talk to you today about Armor. I have always found it a very interesting subject and I hope that you will find it the same. In the study of armor there are many words which are almost unpronouncable and non-understandable, so I will try to make it as plain as possible so that everybody will be able to understand.

The first form of real armor was used by Greeks. They wore a breast plate and back plate such as these. [Shows illustrations.] They always wore greaves or steel leggings but were entirely barefooted. Next came Roman armor, which was much like the Grecian armor except that during the Roman period horsehair crests such as these were used. [Shows illustration.] Soon after this came the Norman period of chain mail. Chain mail is a form of chain armor, is just like chains, only much smaller and woven together so as to make a suit of chains, or coat of mail. The Crusaders wore a head piece of solid steel with a nose piece. This was only worn by the common soldiers. The knights and nobility wore pot helmets, sometimes called bassinets. These were pierced with eye holes and breathing holes. Soon this chain mail began to be reinforced at the different joints, till in the fourteenth century a complete suit of steel armor was produced. They also wore chain mail under their armor, which was a fine protection against arrows and bullets.

During this time there came one of the big battles of history, the battle of Aigincourt. This battle was the turning point in the history of armor. It was fought between the English archers under the Prince of Wales against the French knights. The French knights were at the height of chivalry and at that time wore helmets, arms, and full armor. The English were lightly armed in leather corselets and so were very light on their feet. They hid themselves. The French charged and the English met them with a heavy hail of arrows. The land was very swampy and many of the horses fell into the swamp. Their riders were so heavily armed that once they fell on the ground they were unable to get up. Soon the field was covered with French knights, not all of them dead, but their armor was so heavy it made it impossible for them to arise. The English then ran round lightly and with daggers stabbed them as they lay on the ground or took them alive. Soon after this came the battle of Kersey. This was the final downfall of heavy armor. At this battle the first cannon was used. After this armor was used less and less,

till now in London we see on the horse guards brightly polished steel corselets, but these are only for looks and not for protection.

How to Make a Bow and Arrow

(Delivered by B. J. at age 11 years.)

Care must be taken to make an arrow so that it will fly straight or it is useless. I have purposely brought an incorrect arrow in order to show you the difference between a good and a bad one. A good arrow must have the owner's rings on it, just below the feathering like this [illustrates], in any color he chooses. This arrow has been made wrong. It is not varnished. It must be varnished to keep the rain from breaking or splitting the arrow. To make an arrow, first of all, go to the lumber mill and get some wood that is about 28 or 30 inches long. Make it about one-third of an inch thick and smooth it well with sand paper. Next make the point. There are three kinds of points; a hunting arrow, a scouting arrow, or a target arrow. For a hunting arrow get a barrel hoop. Take a pair of tin snippers and cut it in the shape of a diamond one inch long and one-half inch wide. File it thoroughly until it is very smooth. Then make a little notch in one end of the arrow and wet the point with Le Page's glue and hammer it into the arrow. That is one kind of a point. Another kind of a point is the scouting point and it is made by cutting a piece of tin that will stand hard knocks, to a point about one inch long. Make it so that the thickest part is no wider than the arrow. Then take glue, wet it and hammer it into the arrow. That kind of a point is now complete. For a blunt arrow, take a brass shell from a bullet. See that it fits on the arrow, wet it with glue and pound it on your arrow like this. [Illustrates.]

The next step is the feathering. This is the most delicate operation of all. For a hunting arrow, turkey and goose feathers are the very best, but other stiff feathers will do. Split the feather and work toward the quill. It should be two inches long and one-half inch wide. There should be three feathers on the arrow, evenly spaced, but the first feathering should be one inch or one half inch away from the top. The rings should be put on just below the feathering and should be painted in the owner's favorite colors so that his arrow can be told from among the rest. Now let us compare the right and the wrong arrow. This one has not been varnished, therefore, it cannot stay out in the rain. It will immediately rot. It must therefore be given a good coat of fine varnish that will make it waterproof. An

arrow should be 25, 28 or 30 inches. This arrow is now ready to be notched. The easiest notch to make is like this [illustrates], but it can be made like this. [Illustrates.] The arrow is now complete and ready for use.

We will now start on the bow. An archery bow should be the owner's height and it should be three inches wide in the middle and should gradually slope down until it is one inch wide at each end. Each end must have its notch like this. An Indian bow should be about three or four feet high. It should be $2\frac{1}{2}$ inches wide in the middle and should slope down to about $1\frac{1}{2}$ inches at each end. Fortunately California furnishes several good bow woods: hickory, black walnut, plain walnut, Oregon yew, ash, white ash, juniper, and spruce. I think that perhaps walnut or ash is the best for boys our size. You may now paint on it any kind of designs you wish. You may even decorate it with feathers. But you must not forget to give it a good coat of varnish to keep it rainproof. Neither your bow nor your arrow should have any cracks nor any other defects on it.

Now for the cord. An Indian cord should be made out of rawhide in this manner. [Illustrates on board.] It should be about $1\frac{1}{2}$ inches longer than your bow. The cord itself should be about $\frac{1}{3}$ of an inch thick. Now take one end and tie it securely on the bottom notch of your bow. Now for the other end. I can hardly explain it, but I can show you on the board. [Illustrates.] The cord must be slipped off the noose of the bow every night or the bow will lose its shape. An archery cord is made in an altogether different way. First of all get six or seven strands of shoemakers thread, wax them thoroughly and twist them together, twisting *away from you.* Now tie a knot at each end to hold them together. Then wax it over again with bees wax thoroughly. The noose and loop are made as I showed you in describing the Indian cord. Slip it on the bow and keep it there until the bow is shaped. Sandpaper the whole thing carefully.

To make the wrist guard take some old cloth, perhaps a handkerchief and pad, and make it about one-half inch wide and ten inches long. Now sew some little straps on it and fix them so they can buckle together. If you wish, you may color it or design it.

You may now make your quiver. First of all, you may get a cloth perhaps two inches shorter than your arrow, or you may make it out of cardboard, formed in the shape of a long, narrow tube. Put a bottom on it and make a cover out of cloth or paper, varnishing it

thoroughly. Fasten a strap to it so you may slip it over your shoulder.

Now for a target, and the outfit will be complete. Get a good thick board about two feet by two feet square and about one inch thick. Cover it liberally with mud. While the mud is still fresh cover it with green grass and green leaves. Stamp them down so they are hard in the mud. Then fasten a piece of cardboard or paper over the whole surface. I will go to the board and show you how to make your rings. First, get a stick about one foot long [illustrates] and make a hole at every inch on it. You may then fasten it by a nail at the very last hole in the very center of your board for your target. At the end hole insert a small pencil. Shove your board around once and you find you have made your first circle. Do the same until you come to the end and now your target is complete.

Now for the tripod. Get three sticks about three or four feet high and about one-half inch thick, and nail them together with wire. On the top nail a cigar box. On top of that you may glue or nail your target, and it is now complete.

You may now go into the woods or in an archery contest and you may be sure your outfit is little inferior to any in the stores, and cannot be damaged by rain.

CHAPTER FIFTEEN

Summary and Conclusions

Gifted children who are taught at home for several years, either by parents or tutors, usually possess a richer background, a larger fund of general information, and a far more extensive vocabulary than normal children of the same age. Investigation of the school progress of many gifted children who have come under the writer's observation disclosed the fact that the most highly gifted of those who entered school at six advanced in almost every case to the third grade in less than a year, when given opportunity. It is her experience also that the home-trained gifted child, upon entering school at nine or ten years of age, can function with ease in the opportunity room with a group engaged in sixth- or seventh-grade work. It is sometimes necessary to give additional attention to the training of these individuals in one or more of the mechanical subjects — the fundamentals of arithmetic, the mechanics of written composition, spelling, writing, or manual work. These subjects have often been neglected in the home, or gaps exist due to insufficient organization, the usual concomitant of the incidental method of teaching. This condition may be the result of absence of interest amounting almost to boredom on the part of the child, who is more vitally concerned with some form of creative work. However, a few weeks of definite instruction in any of these subjects, barring in a few cases those involving manual dexterity, will usually not only bring the child to, but greatly above, the level for his chronological age. In general, the educational age of gifted children is not so greatly accelerated in tool subjects as in content subjects, with the exception of children showing a definite bias for mathematics. Yet results of standardized tests show that gifted children who have experienced any systematic organized training

usually earn scores in even these less-liked subjects greatly in excess of the norm for the grade in which they are located. The most effective instrument toward improvement of the gifted child in the manipulation of tool subjects is graphic representation of their test scores in comparison with standard norms.

The extraordinary ability manifested by gifted children in social science, natural science, literature, art, and English composition is no doubt a complex resultant of many causes. In nearly every case there is evidence of early and constant contact with good literature through the medium of story-telling or reading in the home. Many are taught to read through definite instruction, or learn to do so, apparently without training, at a very early age, sometimes as young as three and a half years; consequently at the age of seven they have often read the juvenile books which the average child reads at about the age of ten. At nine or ten they are beginning to read adult books, especially history, science, nature, and travel. Thus at the age (about nine) when the school-trained child begins to read independently, they have accumulated a mental furnishing only equaled by normal children several years their senior.

The method of teaching employed by the parents of our gifted children has usually been favorable to the development of individuality. "Let the child be free," "Loose him and let him go," is the essence of their educational philosophy. Teaching has been incidental, informal, and exceedingly effective because administered in response to a "felt need" on the part of the child. The mechanical processes have been taught through games originated by the parents and by the use of much concrete material. Self-activity and self-expression in some definite concrete way have been fostered. The gifted child usually has a hobby which he is permitted to indulge, such as writing books, painting, modeling, inventing

toys or mechanical apparatus, and numberless other creative activities. These interests lead to investigation, wide reading, visiting libraries and museums, collecting data, using the research method, and attacking problems in a scientific manner.

Perhaps the one factor which contributes most to the development of the gifted child is the custom of the parents, in many cases, of habitually conversing with the child as one adult converses with another, respecting his opinions, answering questions intelligently and truthfully, or studying with him problems which he is seeking to solve and encouraging him always to delve and think until he finds the reason.

There are certain qualities which are sometimes undeveloped in the highly gifted child, especially when he is tutored at home. A minority evince social shortcomings which are pitiable, and show utter inability to play with and understand other children. Yet the most unpromising cases coming under the writer's direction have, after a few weeks' association with children in the opportunity room, shown marked improvement in social adaptability. This would lead us to feel that gifted children can, in almost every case, adapt themselves in an environment affording contacts with children of their own mental level.

Some seem utterly unable to attain satisfactory results in hand work or in physical activities. This unskillfulness is not so easily overcome as the lack of social consciousness. In some cases the antipathy to hand work is so intense that it can be overcome only through exceedingly skillful teaching, especially in case the child is required to take his hand work with children chronologically older and physically larger and stronger.

The foregoing are the negative cases, few in number. In general, gifted children exhibit the same traits evinced by average children in a different degree. They are socially

adaptable, play normally (with children of their own mental age), coöperate, and are good leaders. They express friendliness and good-will toward other children, who in turn admire and like them. With the exception of children of foolishly proud parents who have apprised the child of his mental superiority, there is no indication that gifted children are more conceited, egotistical, or vain than average children.

In the majority of cases the ability is general rather than special. A few children, talented in special lines, manifest very superior general ability also; others give evidence of moderate general ability only.

As large a percentage of these children enjoy good health and freedom from nervous disturbances as of average children, although a few are high strung, nervous, and underweight for their height.

The gifted child is exceedingly studious, being greatly superior to the average child in this respect. With some the desire to learn seems to be almost an obsession; with others studious habits arise from sheer interest and a bookish turn of mind. On the other hand there are gifted children who are mentally lazy and so fail to live up to their capacity.

As a rule the critical faculty of the gifted child is highly developed, as is evidenced by the ability to criticize himself and by the disposition to accept graciously the criticisms of others.

CONCLUSIONS

It is not wise to push the exceptionally gifted child as rapidly as possible through the grades and to send him to the high school at an age at which he is socially unable to affiliate with his classmates. It is better to enrich the curriculum, keeping the child's intellectual power active in an environment affording opportunities for association with children who are mentally and physically his peers. In this way the

child will escape the social ostracism which is the invariable fate of the "high school baby." In cases of economic need the necessity of a "speeding up" process should be obviated by a system of free scholarships or stipends.

In the writer's opinion, the elementary school education of gifted children is greatly facilitated by segregation in opportunity rooms, as these offer unexcelled advantages for enriching the curriculum and adjusting the gifted child socially. The opportunity room eliminates gaps resulting from skipping grades and extra promotions. It provides also for a logically organized educational program on the plane of the child's mental ability.

Education based on individual differences, which is the method of the opportunity room, permits the child to take his own pace, to work to the maximum of his capacity, to develop habits of industry and mental alertness, and in every way to make the most of his abilities and talents.

Since the opportunity room places the child in competition with his mental peers, it is inimical to vanity, egotism, or a supercilious attitude toward the attainments of others, and favorable to intellectual development through mutual stimulation.

The most important consideration for the gifted child is the curriculum. If it is not to be a "speeding up" process merely, special curricula must be written or the usual curriculum must be greatly enriched. This enrichment may be accomplished in the following ways:

1. A curtailment of the time allotment of the various subjects to from one-half to two-thirds the time required in the average classroom.
2. Reduction of drill, explanation, and development.
3. Definite instruction in how to study independently.
4. Development in the child of a scientific attitude toward

his own progress and of a scientific method of attacking problems.

5. Opportunities for all forms of creative work — the writing of plays, stories, and poems; publication of newspapers; organization and direction of literary and civic societies; presentation of plays, pageants, and pantomimes.
6. Instruction in foreign languages.
7. Opportunities to see especially good motion pictures and spoken plays.
8. Opportunities to hear eminent lecturers, political leaders, visiting consuls, travelers from foreign countries, or specialists in any line, such as musicians, artists, librarians, scientists, and others.
9. Trips into the country under the guidance of a specialist in nature lore for the purpose of studying birds, animals, or growing things.
10. An understanding of commercial and industrial life through visits to commercial and industrial institutions.
11. Opportunities to visit libraries, art galleries, and museums.
12. Provision for a symmetrical development by permitting the child to abandon for a time work in which he excels in order to concentrate on skills in which he is lacking.
13. Provision for special physical exercises and definite instruction in body building for the child of delicate physique and for the bookish child who is disinclined to participate in play or physical activity.
14. Opportunities to work out social and civic projects for the purpose of developing group consciousness and quickening the child's awareness of his obligations to the school and the community.

15. Definite training in leadership through voluntary assumption on the part of the child of responsibility for the successful culmination of school projects, and through membership on committees concerned with governmental policies of the school. The formulation of the Progress Rating Card, reported in Chapter XI, is an example of a project of this nature.
16. Special courses in music, art, dramatics, and other special subjects, for the purposes of meeting the needs of children possessing aptitude for technical or æsthetic vocations.
17. Definite provision should be made and concessions granted regarding programs and school attendance of children highly gifted in music, dramatics, and art, in order that general education and preparation for a career may continue at the same time.
18. Special courses in all phases of manual work adapted to the physical development of the child should be provided.
19. The social subjects should stimulate the child to use the research method and to read widely in correlated subjects. They should ordinarily revolve around some central project, creative in nature, with which the entire group is concerned. It is expedient that they create a need for efficient use of the tool subjects.

According to the writer's experience, it is possible for gifted children to complete without pressure by the end of the sixth or seventh school year the curriculum, greatly enriched, which requires eight or nine years for the average child. Special curricula might then be written for the eighth and the ninth grades which would provide a larger and better foundation for high school and university training.

If the education of the gifted child is to be placed on a

scientific basis, the teacher and the psychologist must coöperate in studying the raw material with which they work and in formulating a program affording specific methods for specific abilities. Important lines of coöperative study include:

1. Determination of the earliest age at which the child should be segregated.
2. Careful examination of all applicants for the special room.
3. Measurement of each child's progress, and the comparison of achievement quotient with intelligence quotient.
4. Determination of the maximum size of the opportunity class.
5. Determination of the types of curriculum and subject matter best adapted to the gifted child.
6. The formulation of a plan whereby teachers may be definitely trained in the technique of teaching in accordance with individual differences.
7. The formulation of a plan which would enable high schools and colleges to meet the needs of the gifted individual.
8. Definite follow-up work throughout a long period of years, including high school, college, and the business or professional world, in order to determine more definitely the value of the gifted child to society.

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